

PRELIMINARY REPORT OF 070321

last update on Wed Mar 21 17:51:12 GMT 2007

Due to an ASAR test acquisition campaign, the daily analysis on WVS products will be based on IS4 instead of IS2 during the following periods:

From orbit 25621 (23-Jan-2007) to 25720 (30-Jan-2007) in HH polarization
From orbit 26122 (27-Feb-2007) to 26221 (06-Mar-2007) in HH polarization
From orbit 25721 (30-Jan-2007) to 25820 (06-Feb-2007) in VV polarization
From orbit 26222 (06-Mar-2007) to 26321 (13-Mar-2007) in VV polarization

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1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA_WVS_1P), global monitoring products (ASA_GM1_1P), which are the available few hours after the acquisition, on the browse (BP) products and on the Module Stepping (MS) product.

2 - Summary

2.1 - Instrument Unavailability

No unavailabilities during the reported period.

2.2 - Auxiliary files

Summary of the auxiliary files used from 2007-03-20 00:00:00 to 2007-03-21 17:51:12

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	46	54	15	3	35
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	46	54	15	3	35
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	46	54	15	3	35
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	46	54	15	3	35

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	31	40	36	9	34
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	44	55	42	11	44
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	44	55	42	11	44
ASA_CON_AXVIEC20070320_170948_20070321_003000_20070321_050000	13	15	6	2	10
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	55	42	11	44

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

2.4 - Data Analysis

- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

3 - Module Stepping Mode

No anomalies observed on available MS products:

Polarisation	Start Time
V	20070321 073835
H	20070320 081012

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

MSM in H/H polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS

☒
☒

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1

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☒

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-15.126636	0.120861	-0.046456
7	P1a	-17.477060	0.104140	-0.134170
11	P1a	-17.255287	0.341394	0.134796
15	P1a	-12.901588	0.086213	-0.069997
19	P1a	-15.157360	0.076102	-0.027598
22	P1a	-15.433057	0.661772	-0.203130
26	P1a	-15.045666	0.649201	-0.038732
30	P1a	-17.371626	0.349314	-0.112471

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.744349	0.009895	-0.033169
7	P1	-3.135054	0.008294	-0.006557
11	P1	-4.163636	0.015479	-0.028282
15	P1	-6.380379	0.015811	0.003645
19	P1	-3.773839	0.007859	-0.027843
22	P1	-4.659622	0.074025	-0.025836
26	P1	-3.914011	0.059030	0.042092
30	P1	-5.894201	0.115836	-0.003080

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.647375	0.092044	0.072836
7	P2	-21.607096	0.080958	0.041691
11	P2	-15.521367	0.098209	0.084462
15	P2	-7.077193	0.092891	-0.040359

19	P2	-9.107016	0.081526	-0.003068
22	P2	-18.098732	0.074459	0.034816
26	P2	-16.556795	0.085155	-0.064545
30	P2	-19.333166	0.078111	0.076799

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.235002	0.006404	0.010101
7	P3	-8.235002	0.006404	0.010101
11	P3	-8.235002	0.006404	0.010101
15	P3	-8.235002	0.006404	0.010101
19	P3	-8.235002	0.006404	0.010101
22	P3	-8.235002	0.006404	0.010101
26	P3	-8.234976	0.006403	0.010211
30	P3	-8.234976	0.006403	0.010211

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.088105	0.054745	-0.084725
7	P1a	-10.069818	0.155044	-0.004649
11	P1a	-10.680065	0.068546	-0.050541
15	P1a	-10.948852	0.143174	0.098154
19	P1a	-15.706008	0.071585	-0.169858
22	P1a	-20.854433	1.574944	0.361074
26	P1a	-15.236069	0.309062	0.064240
30	P1a	-18.360432	0.810199	0.263915

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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3	P1	-8.406893	0.046131	-0.045449
7	P1	-2.426003	0.028315	-0.010294
11	P1	-2.922943	0.021029	0.007911
15	P1	-3.849017	0.042571	-0.024059
19	P1	-3.560327	0.010991	-0.047273
22	P1	-5.032689	0.035480	0.079340
26	P1	-5.943564	0.059330	0.036981
30	P1	-5.270115	0.032401	-0.001252

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.102808	0.035638	-0.028055
7	P2	-21.954086	0.058284	-0.028078
11	P2	-10.640885	0.031981	-0.003622
15	P2	-4.826959	0.029820	-0.011388
19	P2	-6.812450	0.031939	-0.013959
22	P2	-8.078129	0.034268	-0.003484
26	P2	-24.290514	0.040201	0.043904
30	P2	-21.720423	0.042128	0.076037

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.059994	0.003743	0.000447
7	P3	-8.059862	0.003733	0.000645
11	P3	-8.059941	0.003733	0.000295
15	P3	-8.060042	0.003742	0.000730
19	P3	-8.059927	0.003745	0.001998
22	P3	-8.059964	0.003738	0.000431
26	P3	-8.059717	0.003721	0.001373
30	P3	-8.059912	0.003739	-0.000013

4.3 - cal pulses monitoring (all rows)

4.3.1 - Evolution for WVS



4.3.2 - Evolution for GM1



5 - RAW data statistics

No anomalies observed.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000665579
	stdev	2.89247e-07
MEAN Q	mean	0.000295084
	stdev	2.81055e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.0915412
	stdev	0.00226389
STDEV Q	mean	0.0913640
	stdev	0.00231983



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007032[901]

The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
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ASA_IMM_1PNPDE20070320_114001_000002562056_00309_26415_9412.N1	1	52
ASA_IMM_1PNPDK20070320_131732_000000812056_00310_26416_7792.N1	0	5
ASA_IMM_1PNPDK20070320_135505_000000602056_00311_26417_7788.N1	0	24
ASA_IMM_1PNPDK20070320_135505_000000792056_00311_26417_7798.N1	0	24
ASA_WSM_1PNPDE20070320_010734_000000852056_00303_26409_8706.N1	0	32
ASA_WSM_1PNPDE20070321_003657_000001402056_00317_26423_0187.N1	0	31
ASA_WSM_1PNPDK20070320_123133_000003062056_00310_26416_7660.N1	0	17
ASA_WSM_1PNPDK20070320_135308_000000852056_00311_26417_7800.N1	0	21
ASA_WSM_1PNPDK20070321_102446_000003002056_00323_26429_8662.N1	0	2
ASA_WSM_1PNPDK20070321_124220_000001332056_00324_26430_8919.N1	0	1
ASA_APM_1PNPDE20070320_021347_000000402056_00304_26410_8728.N1	14	0
ASA_APM_1PNPDK20070320_084923_000000402056_00308_26414_7265.N1	15	257



7 - Doppler Analysis

Preliminary report. The data is not yet controlled

7.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

Ascending

Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

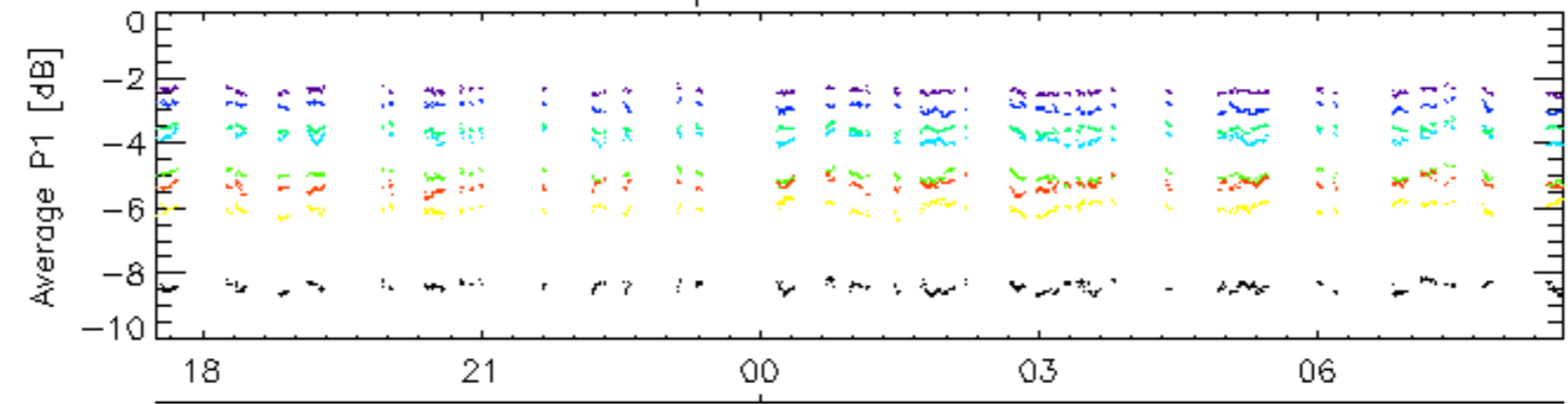
Ascending

Descending

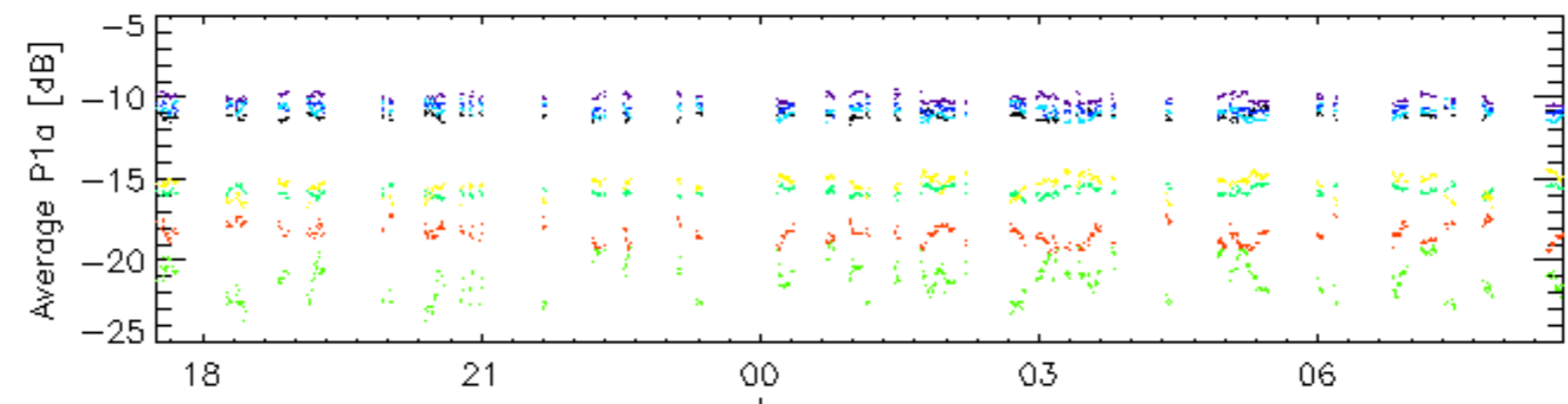
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

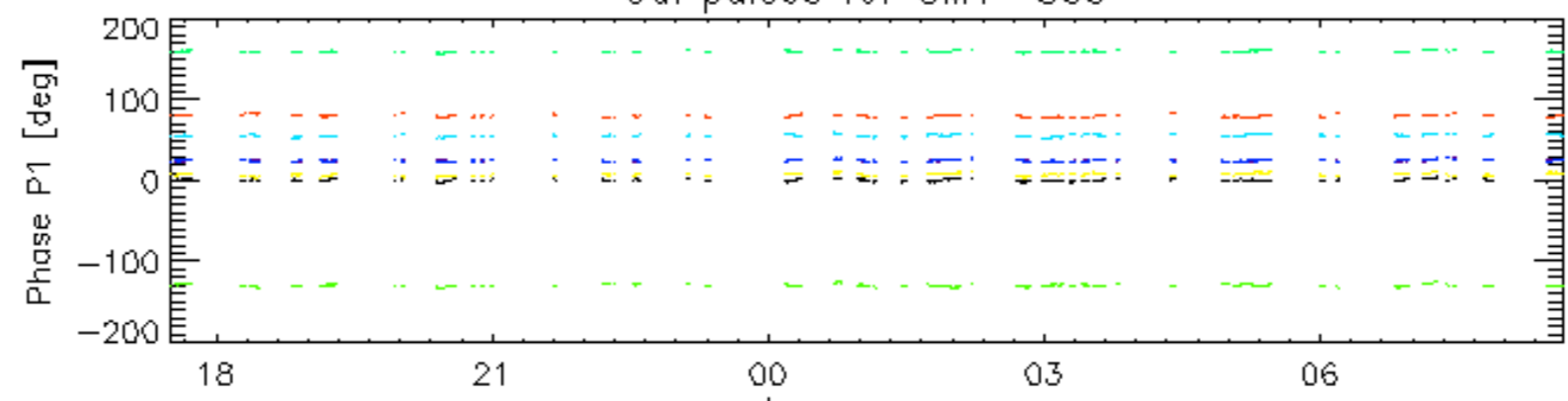


21-Mar

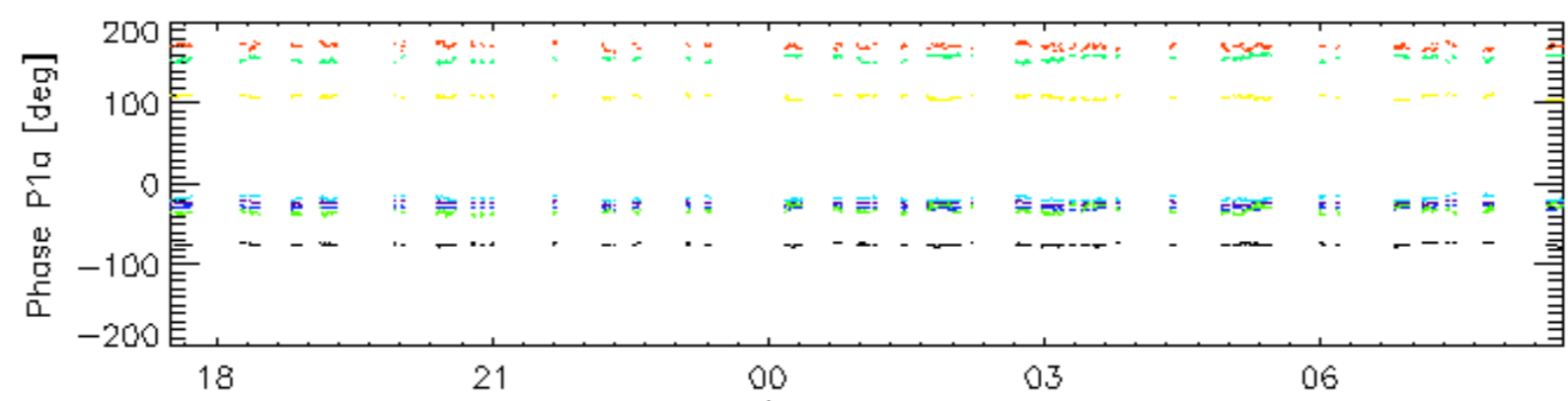


21-Mar

Cal pulses for GM1 SS3

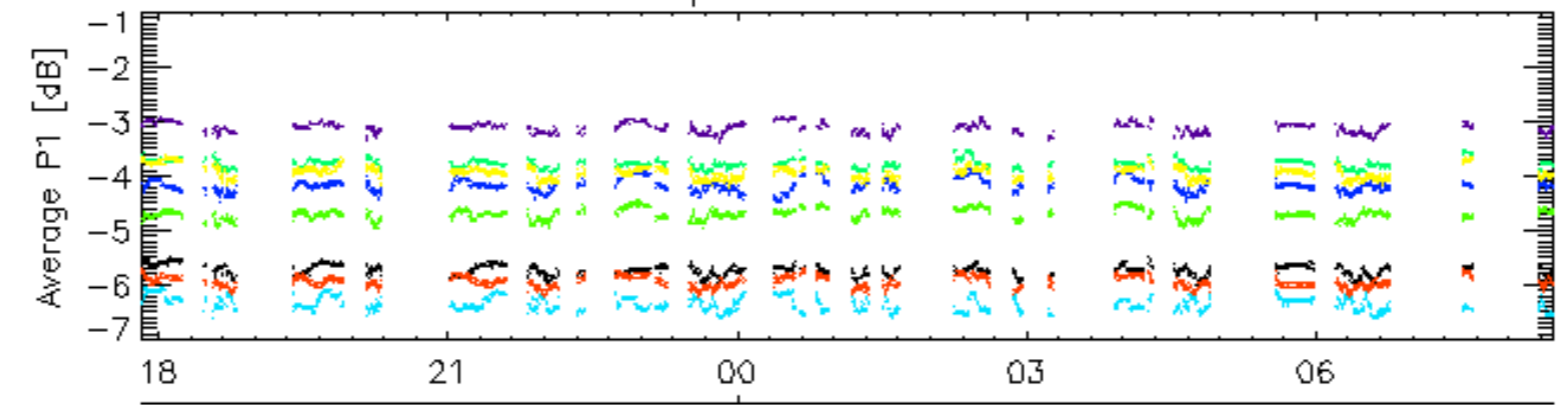


21-Mar

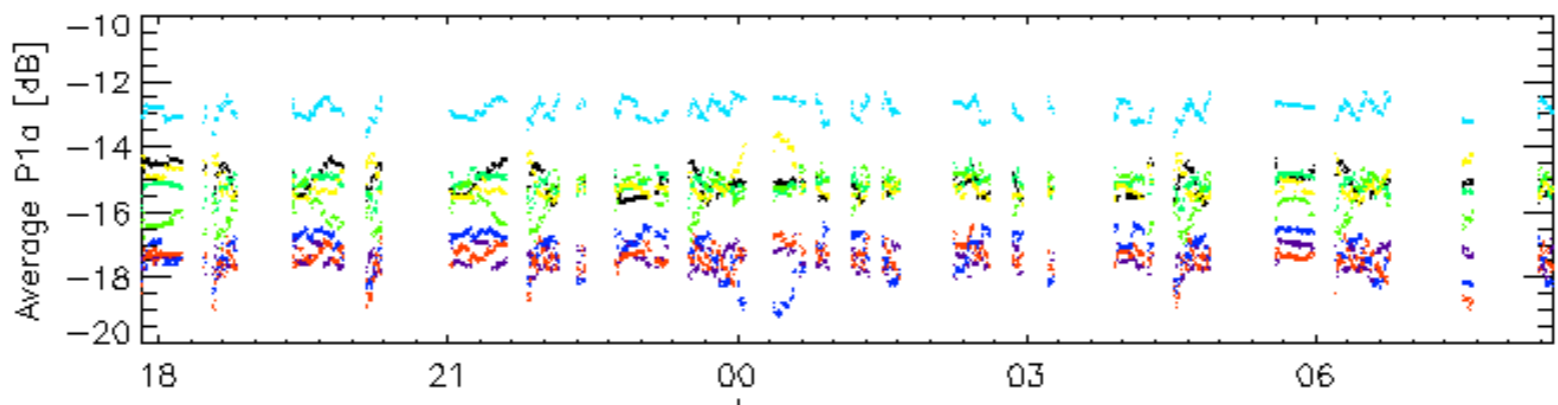


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

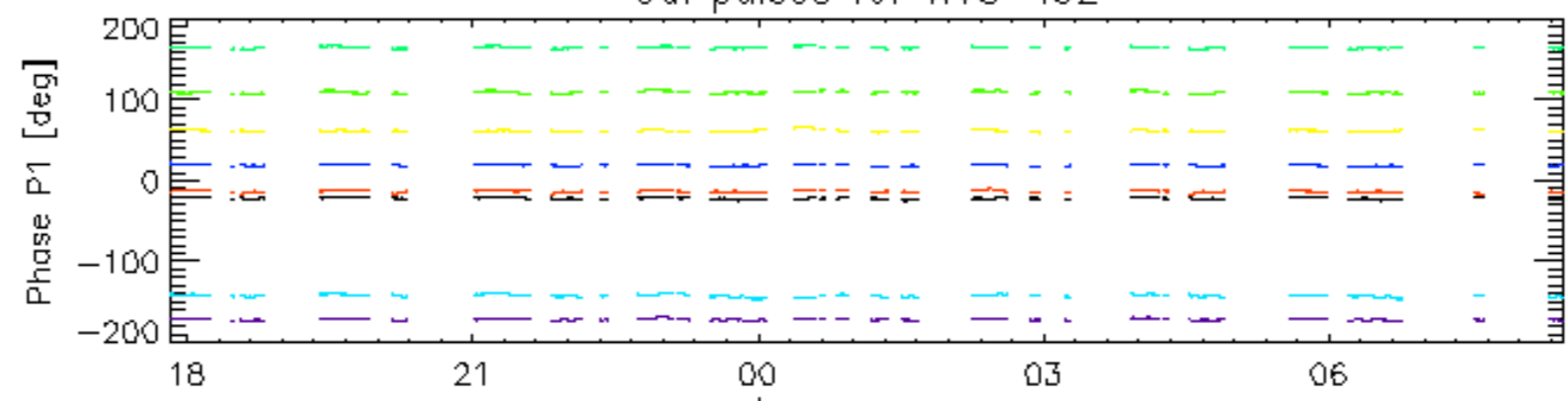


21-Mar

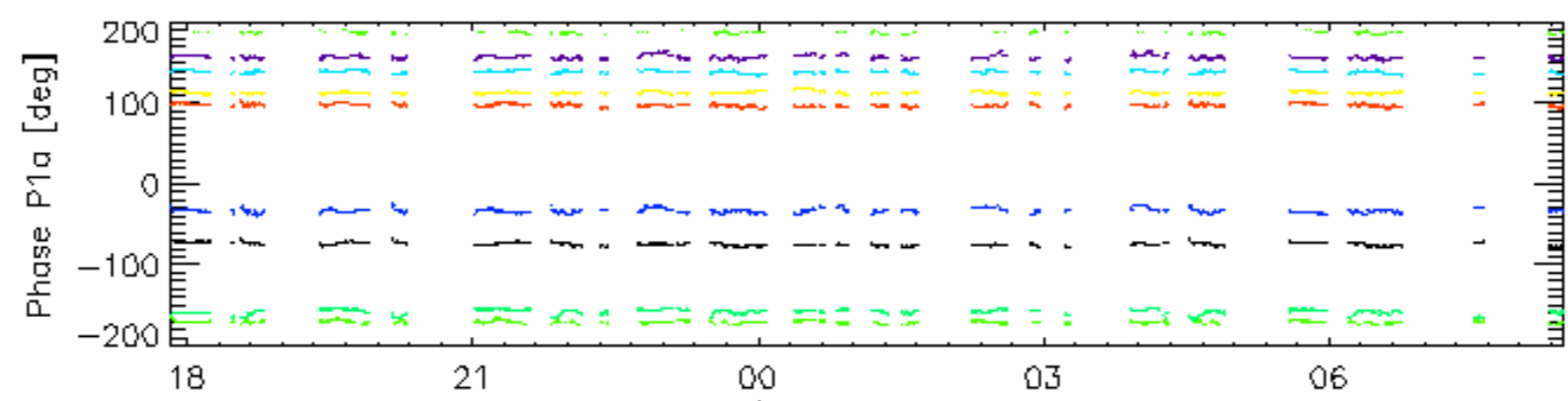


21-Mar

Cal pulses for WVS IS2



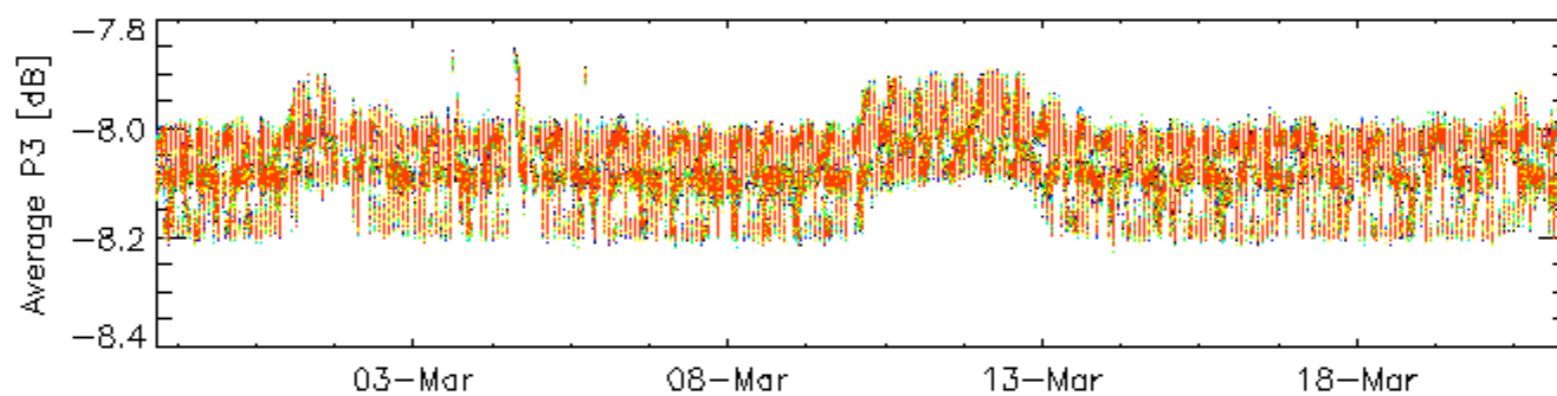
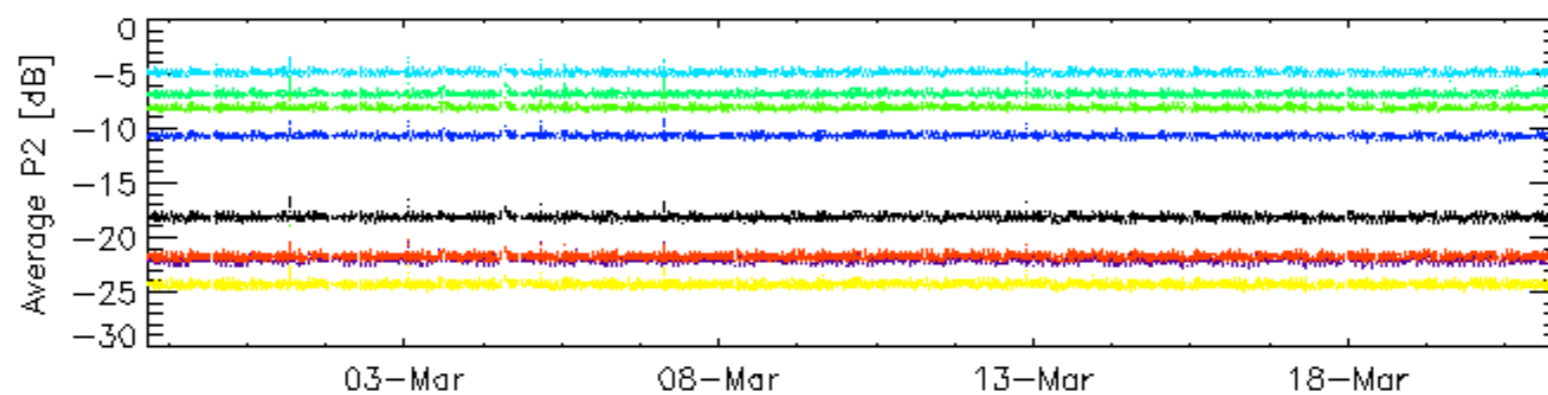
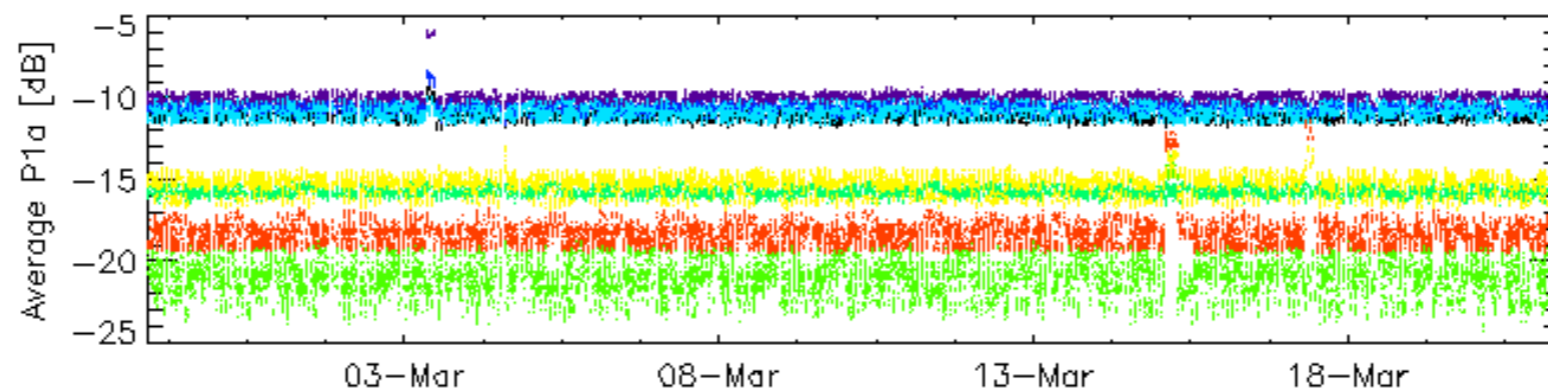
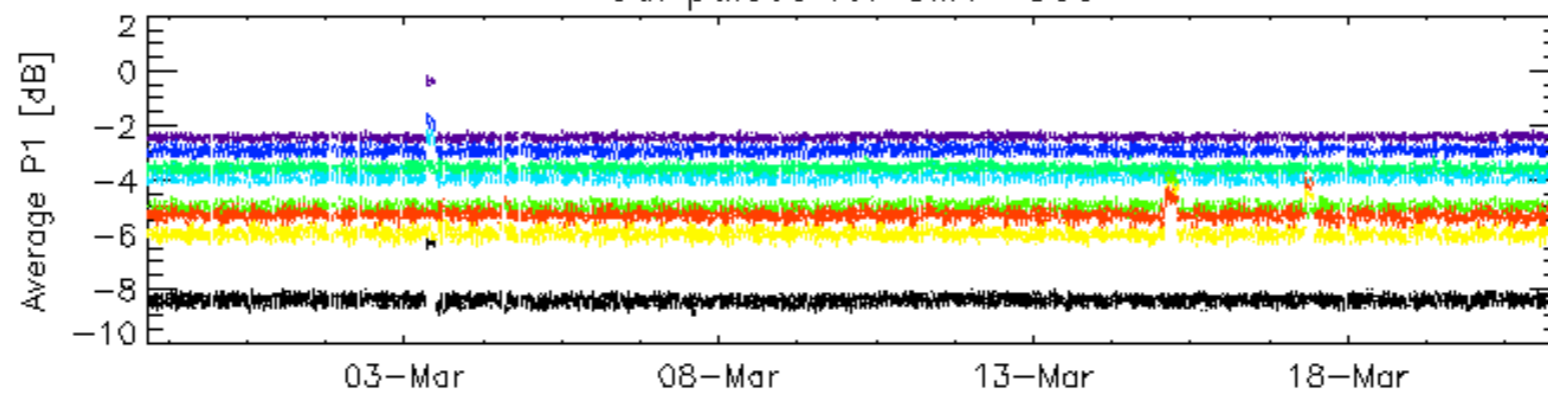
21-Mar



21-Mar

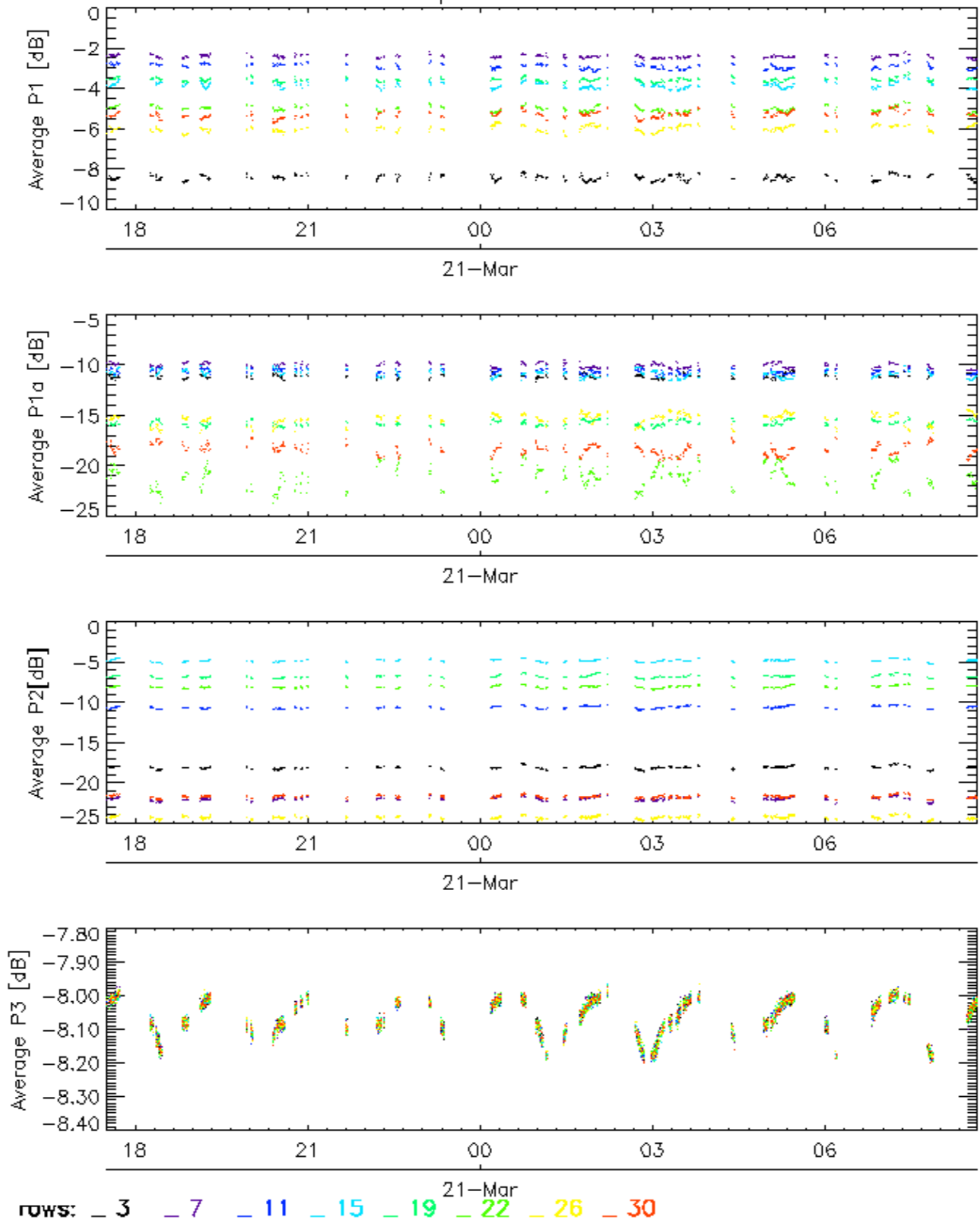
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

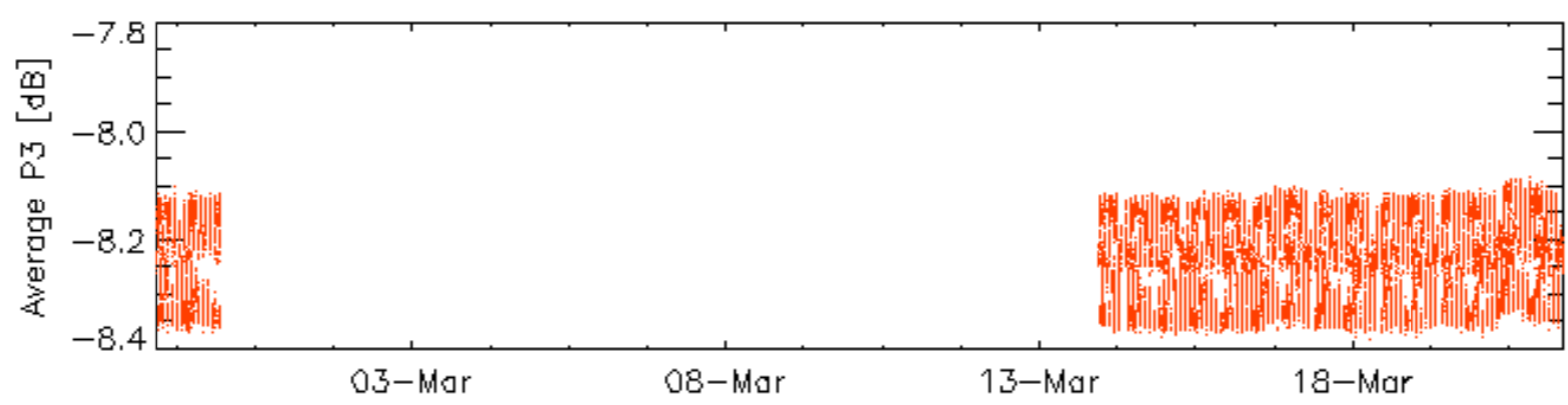
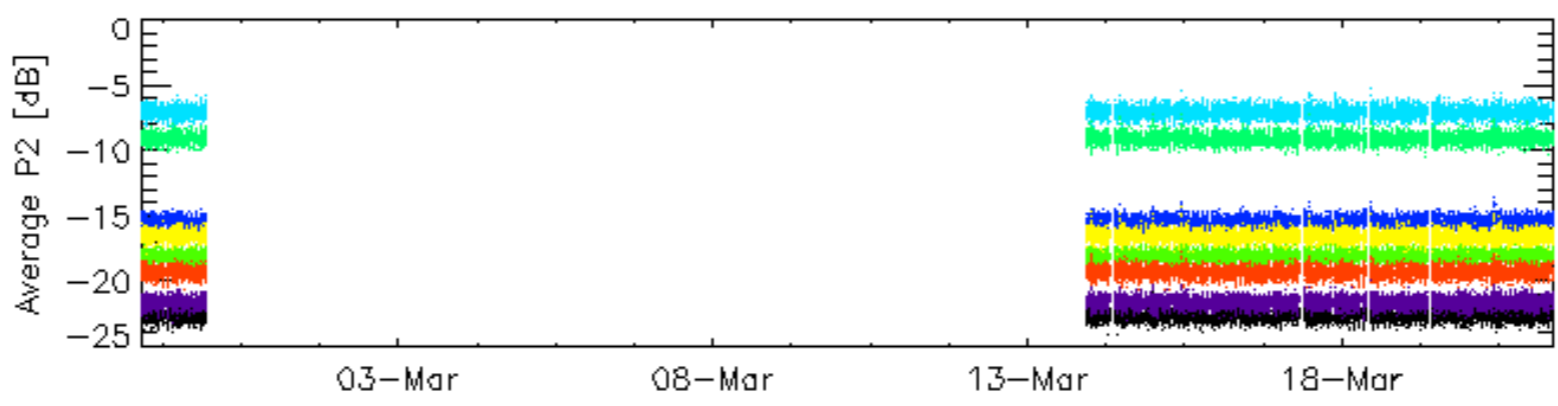
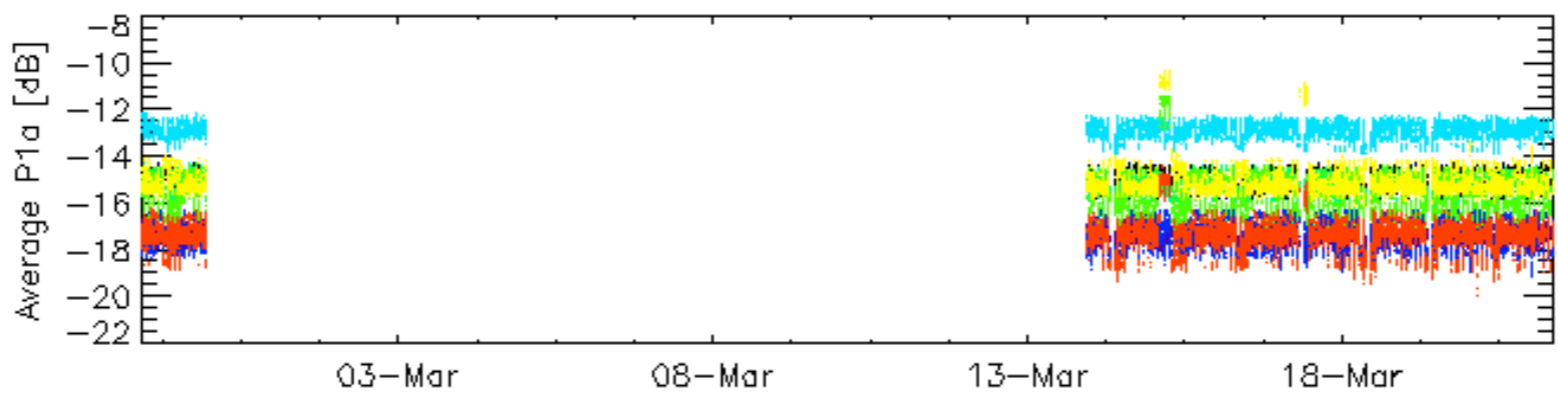
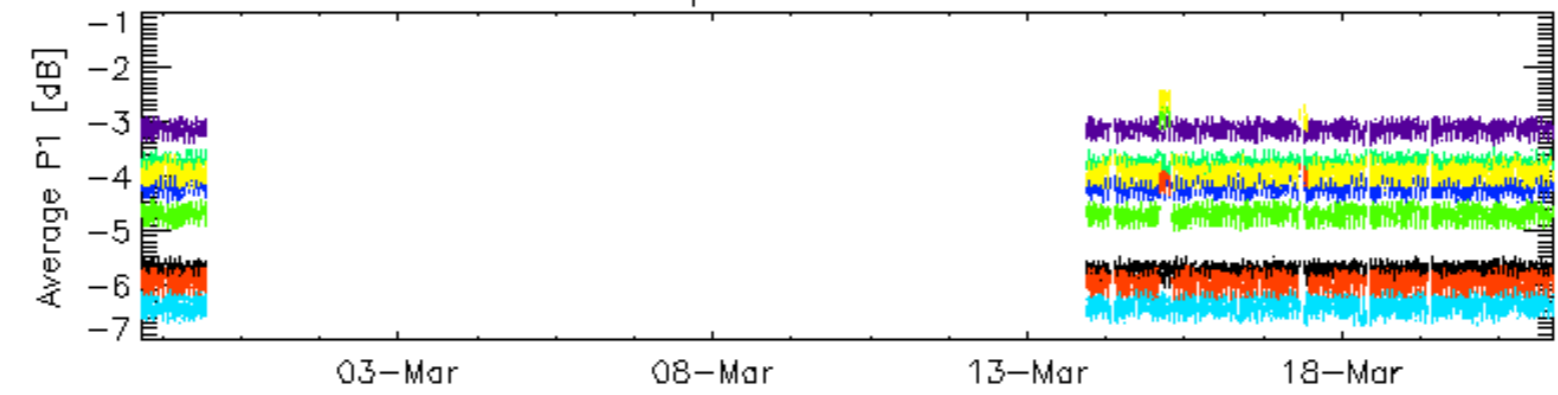


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

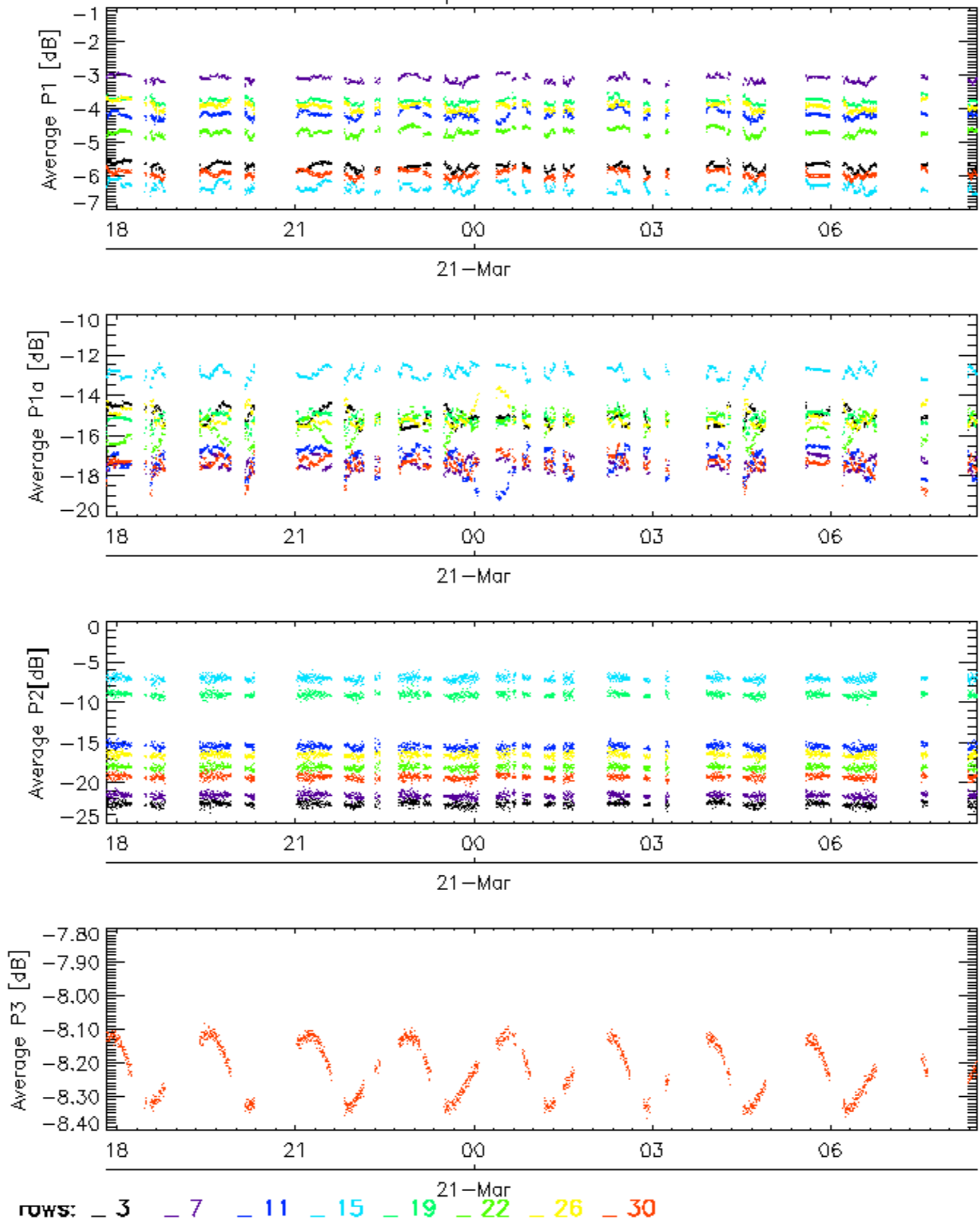


Cal pulses for WVS IS2



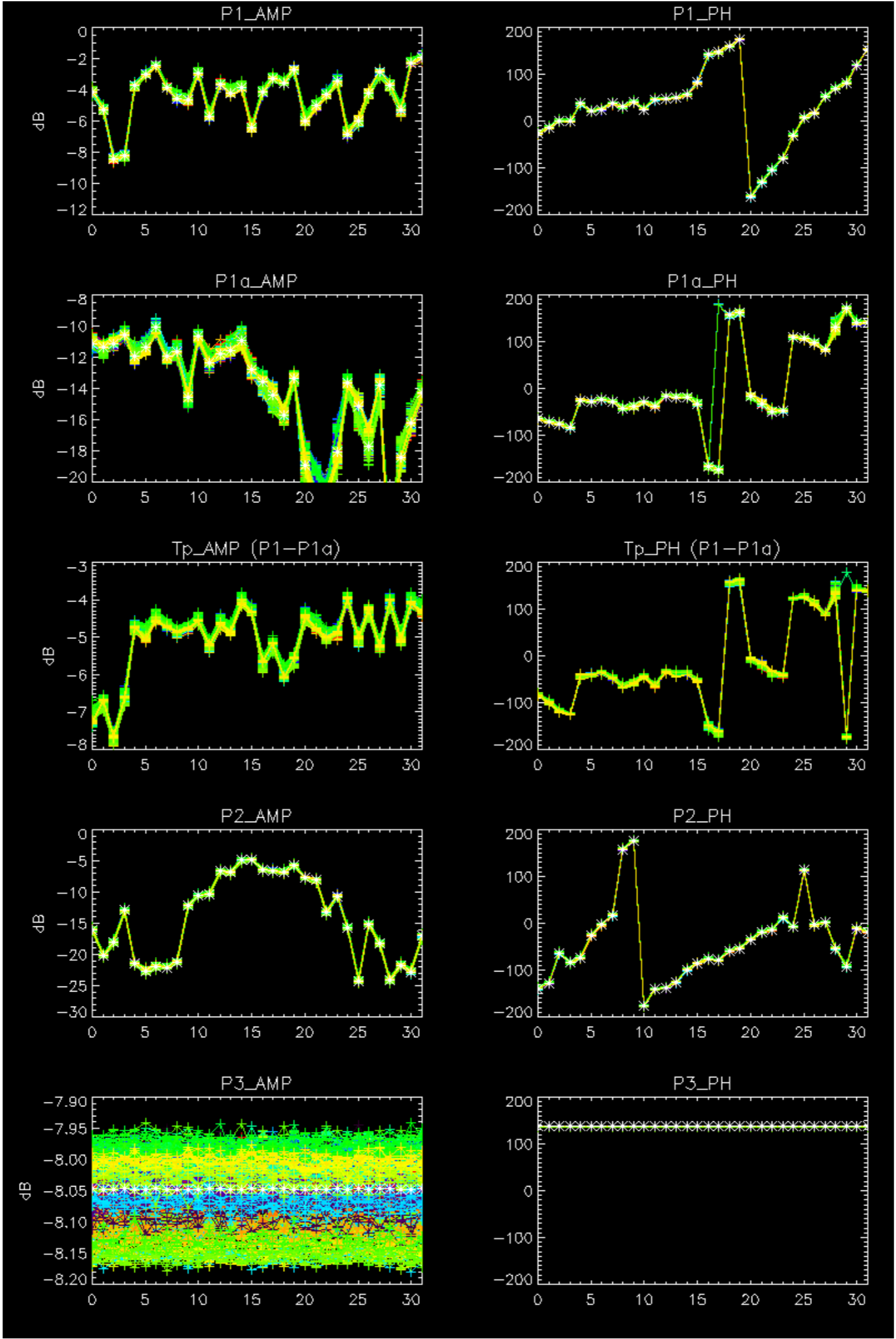
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

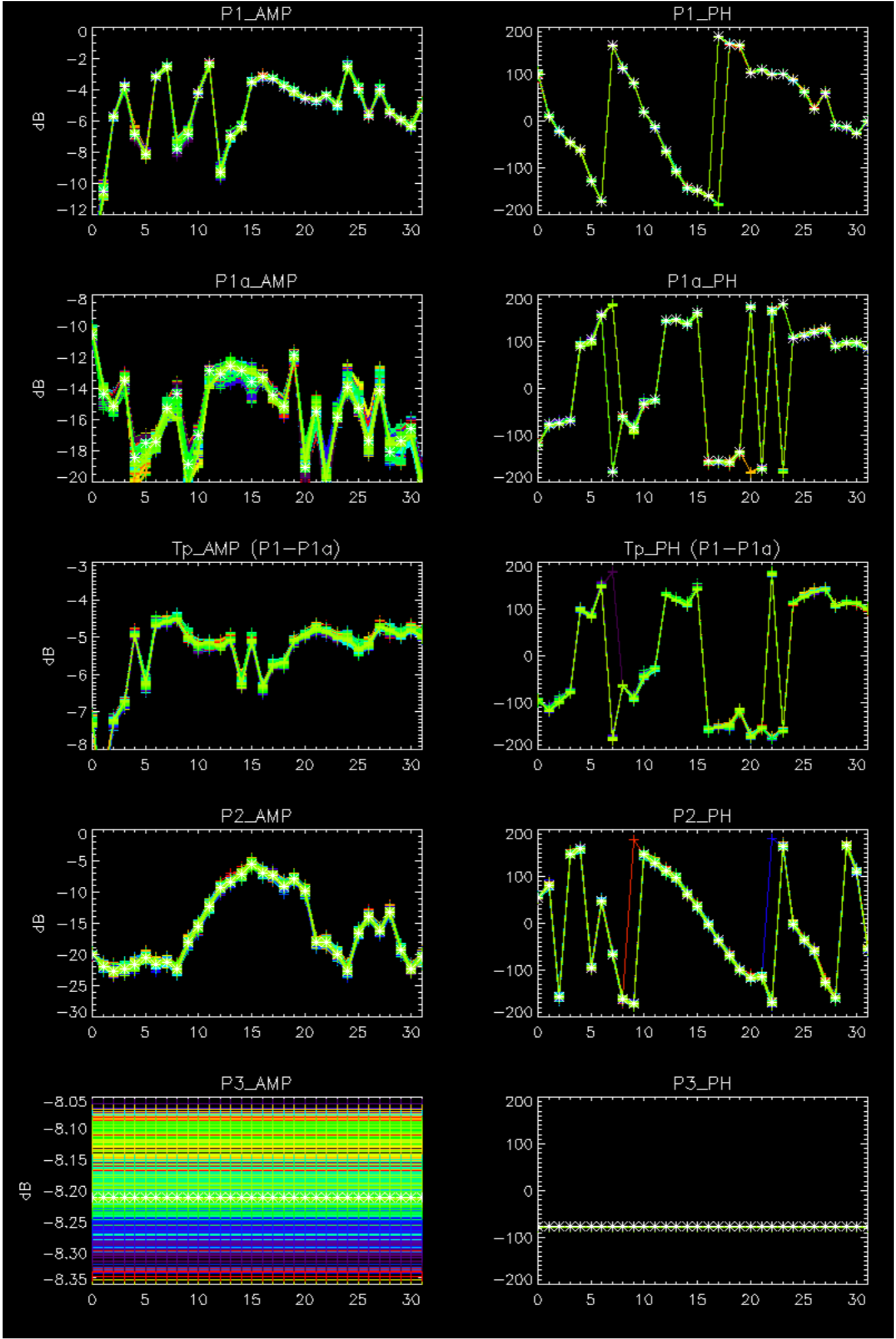
Cal pulses for WVS IS2



No anomalies observed on available browse products

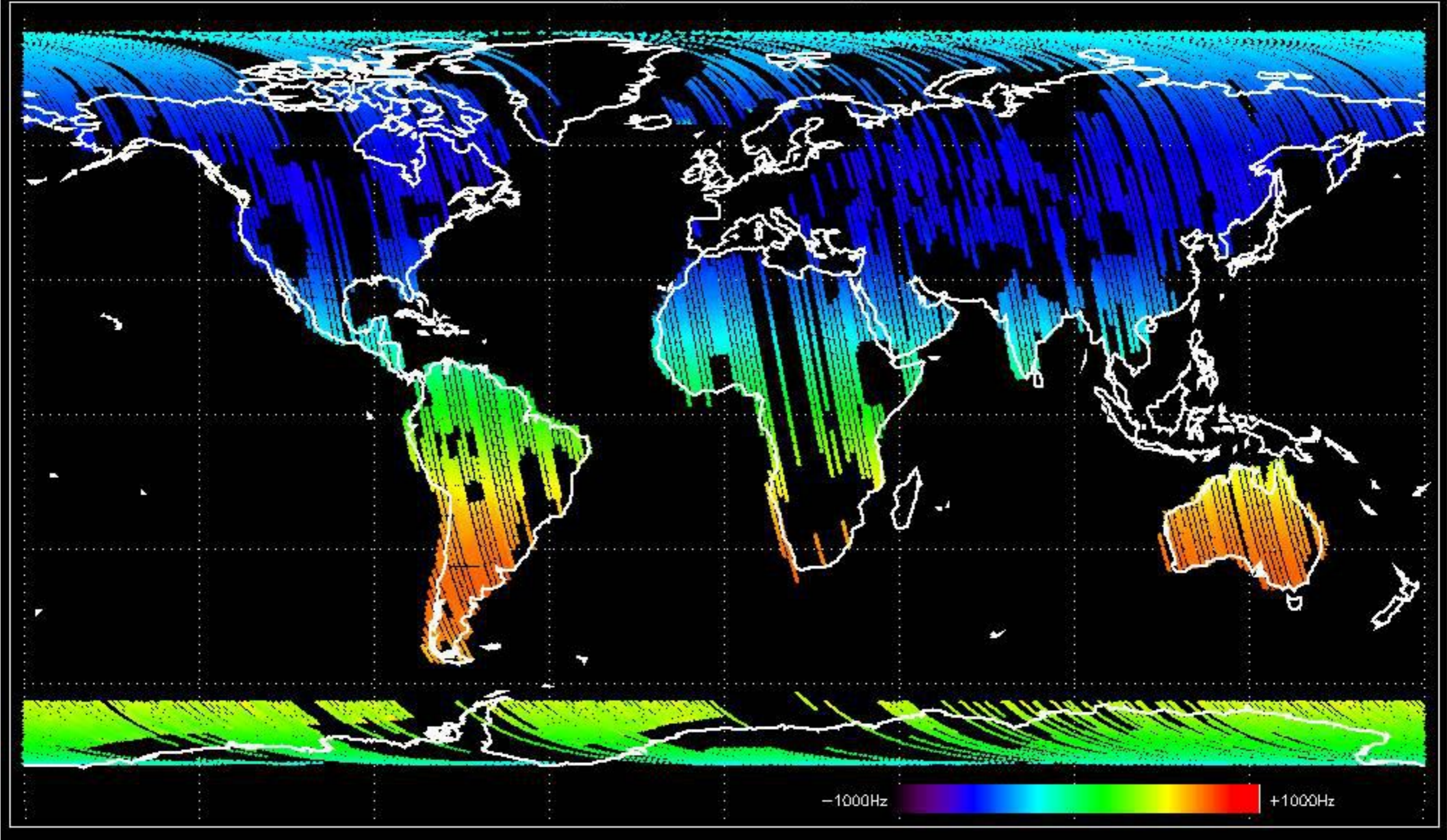
No anomalies observed.



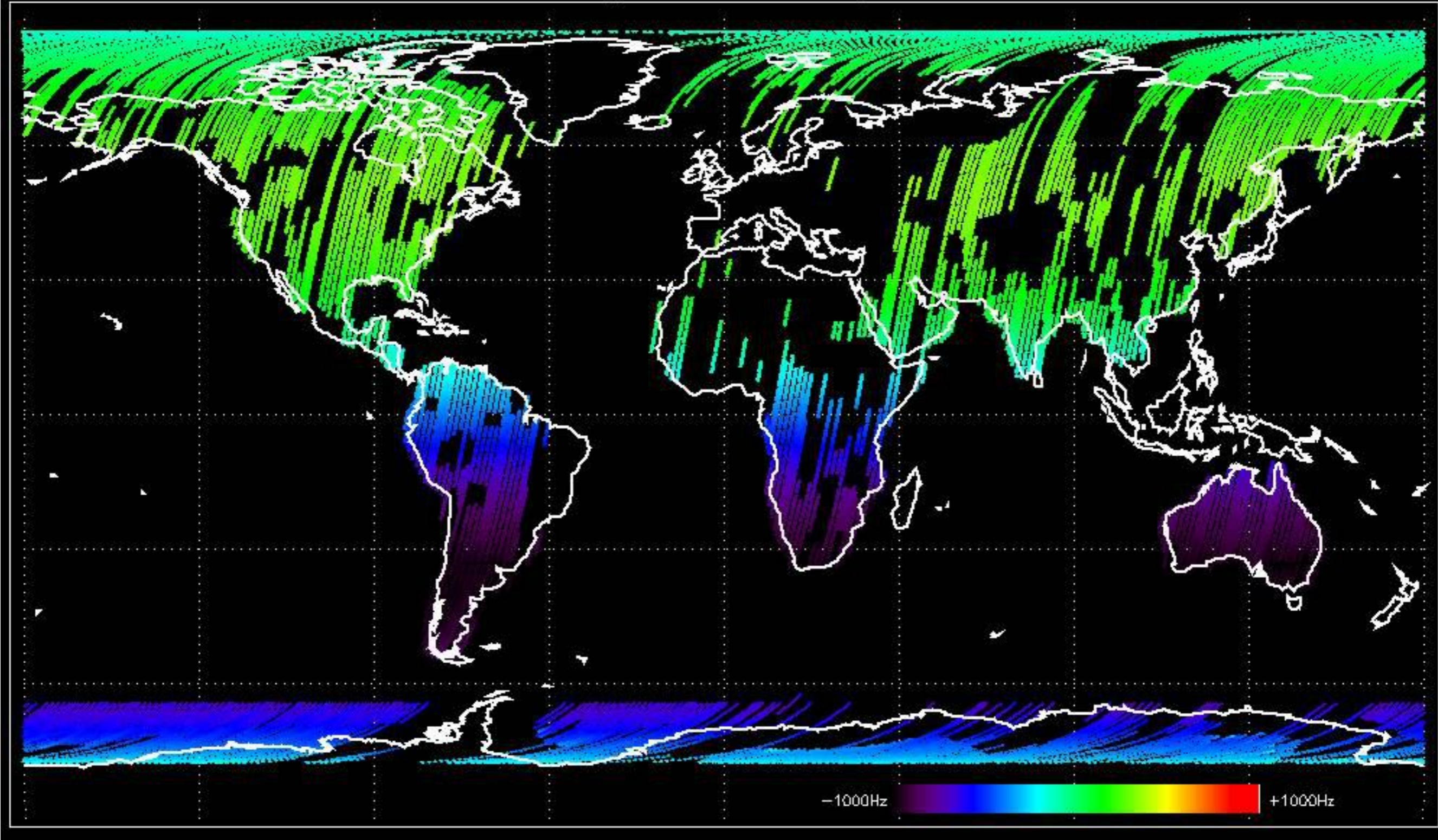


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

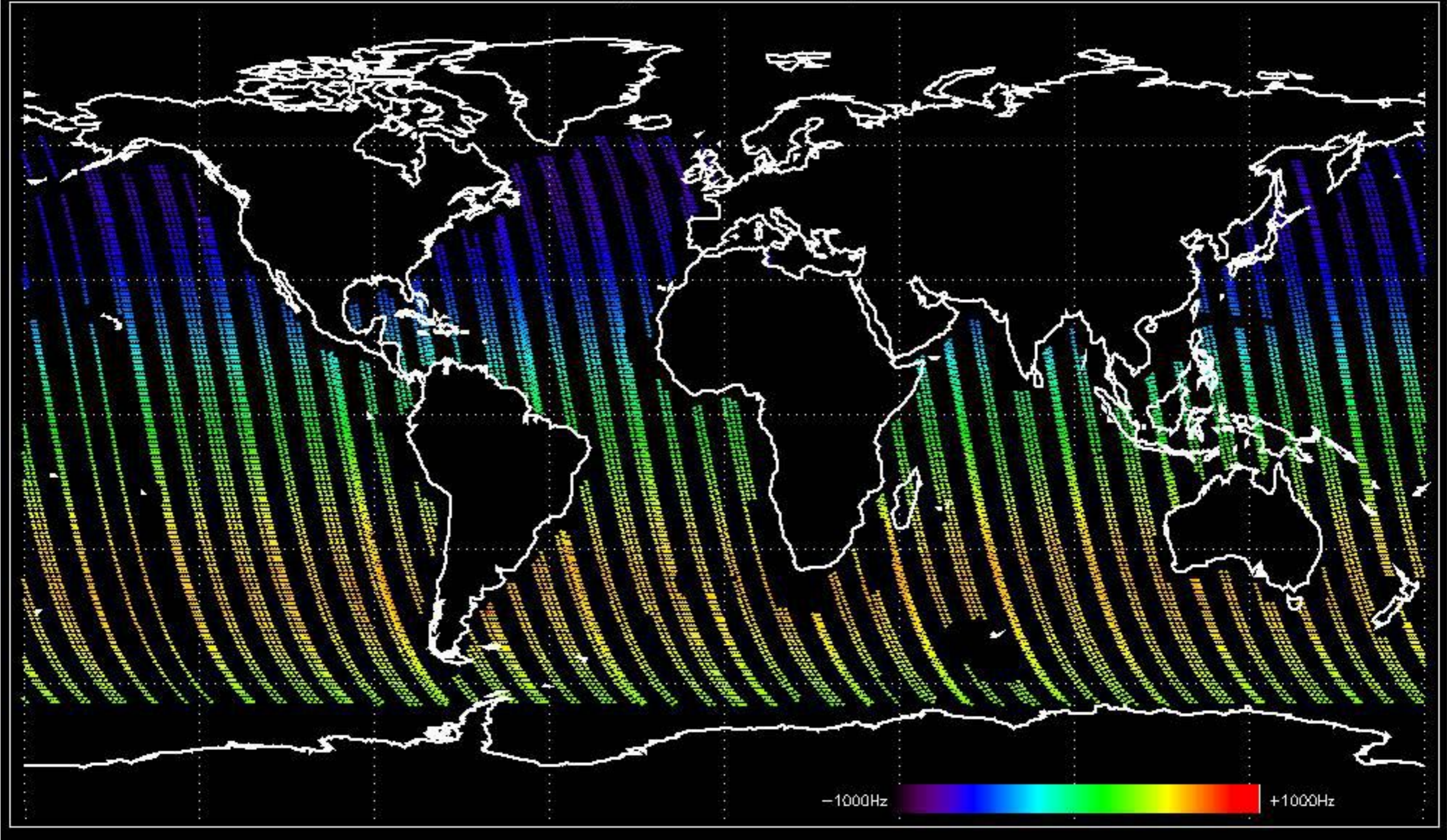
Doppler 'GM1' 'SS1' ascending



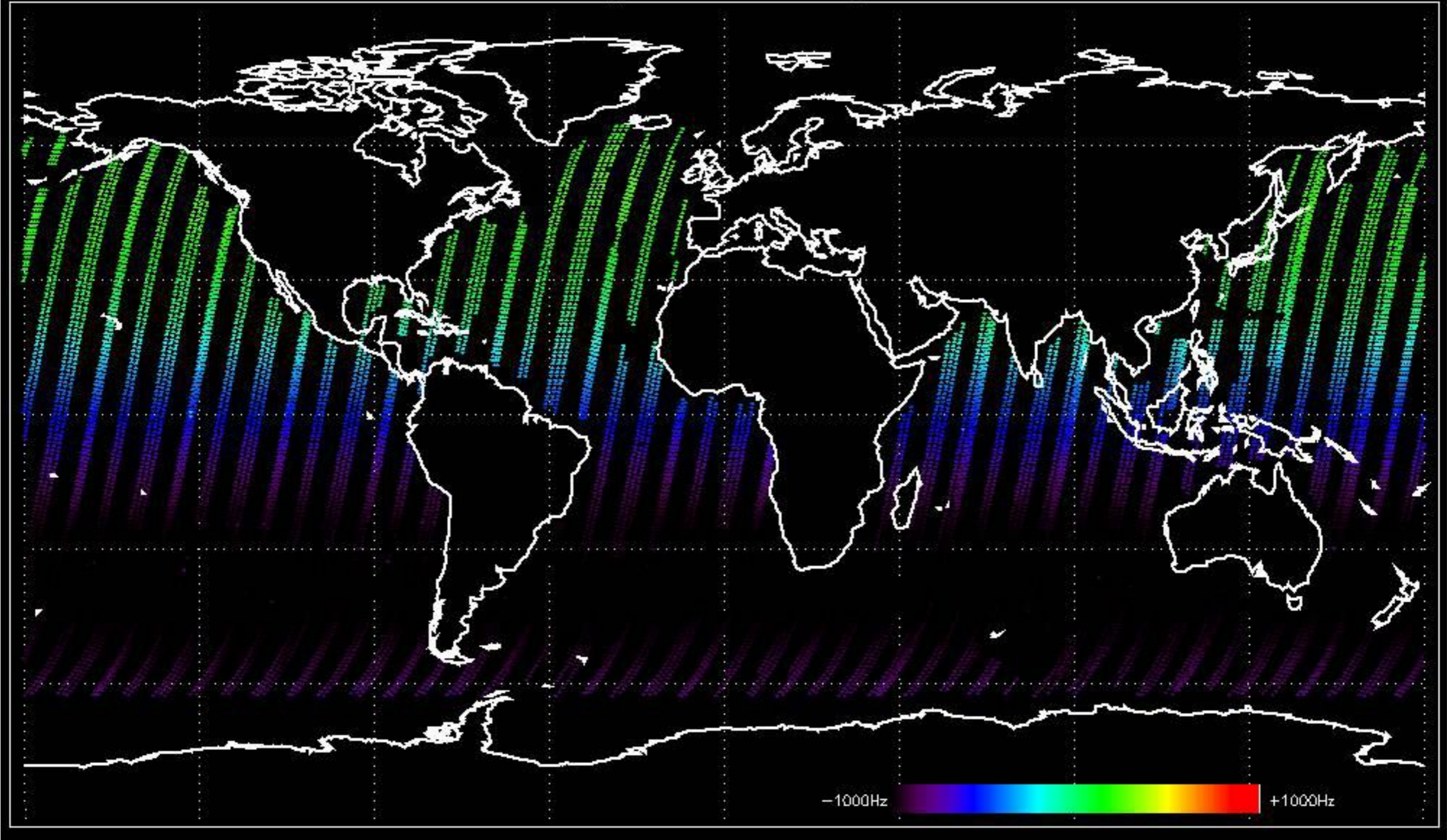
Doppler 'GM1' 'SS1' descending

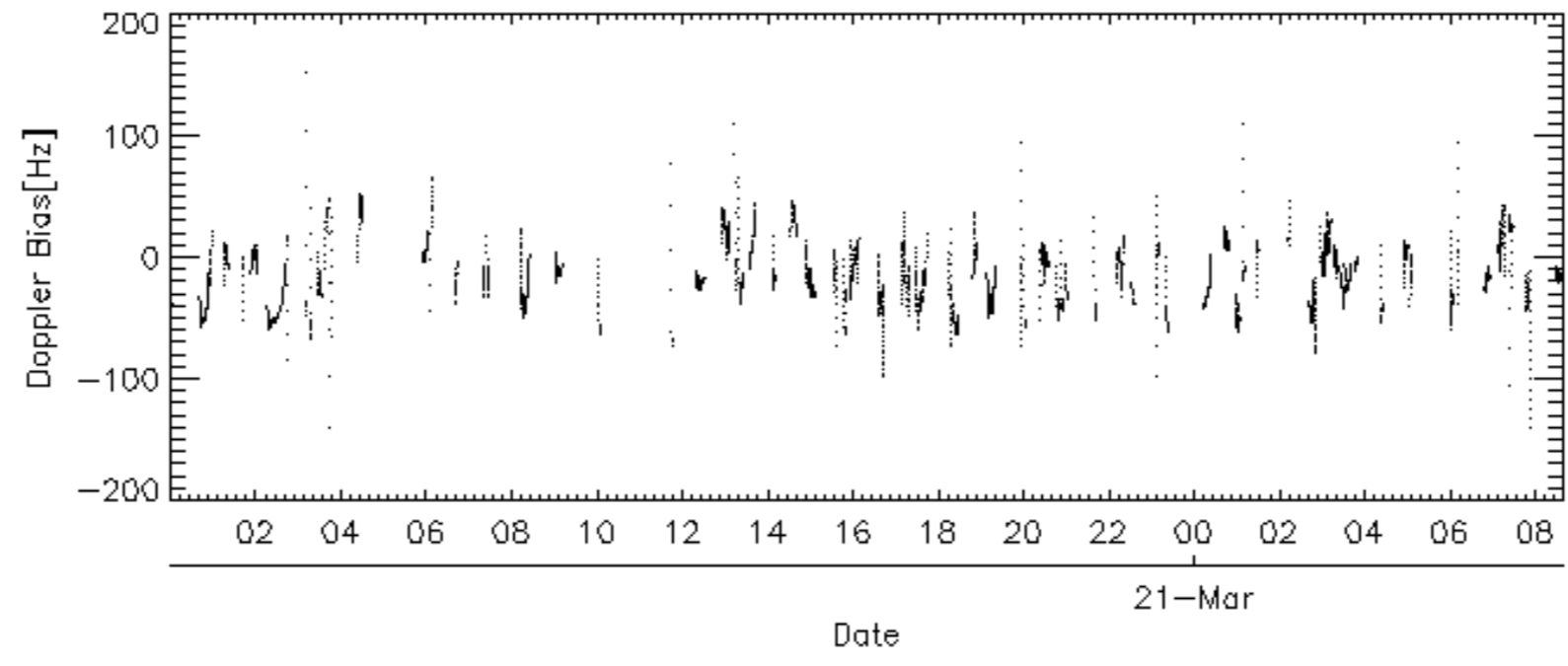
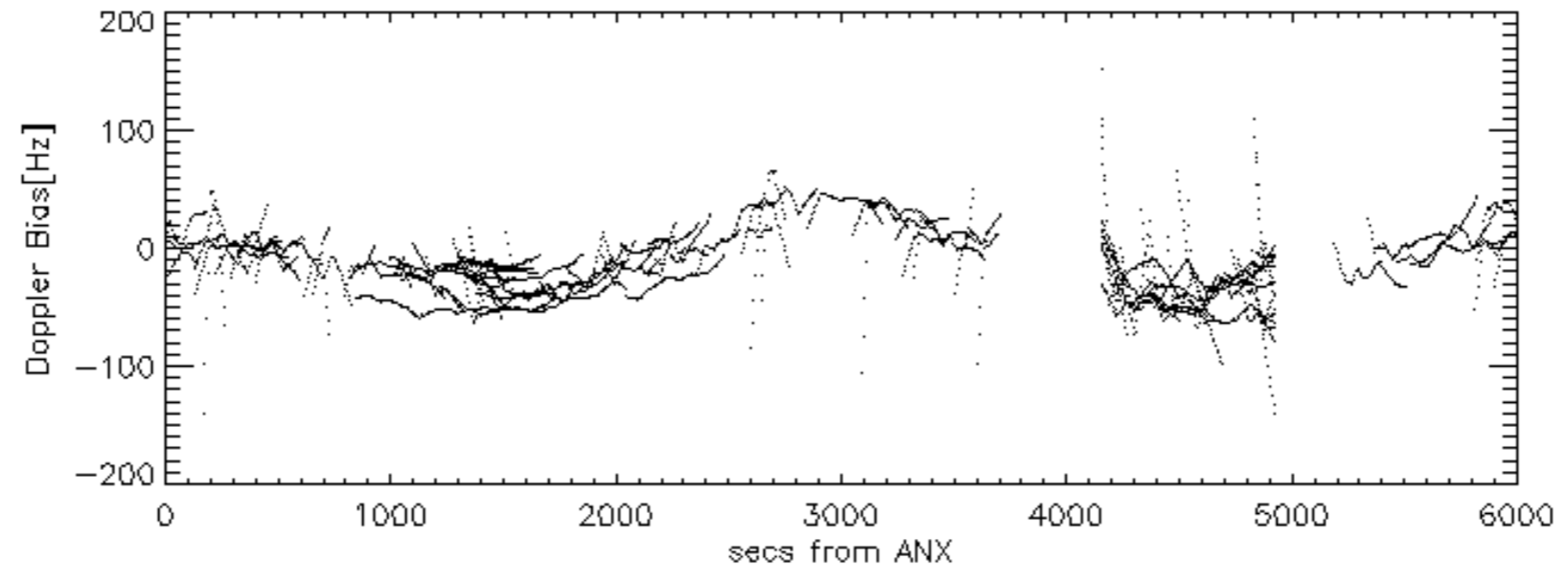
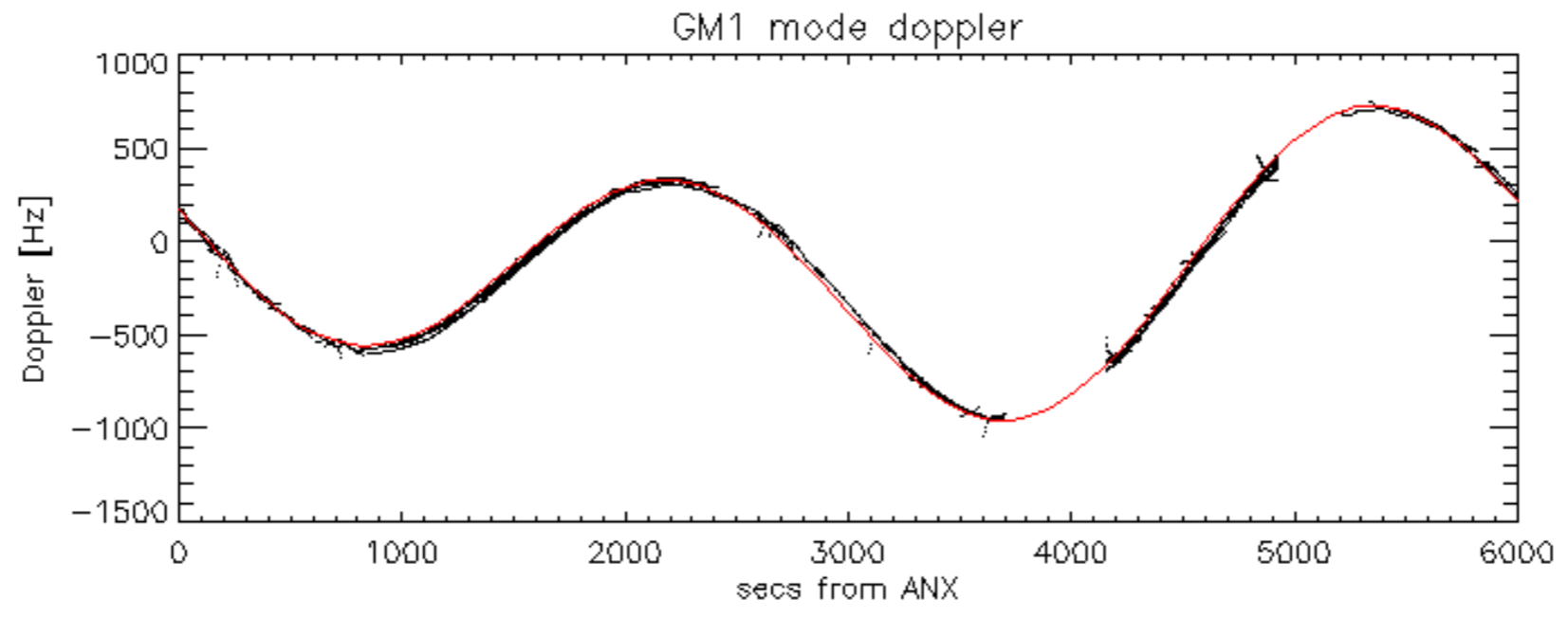


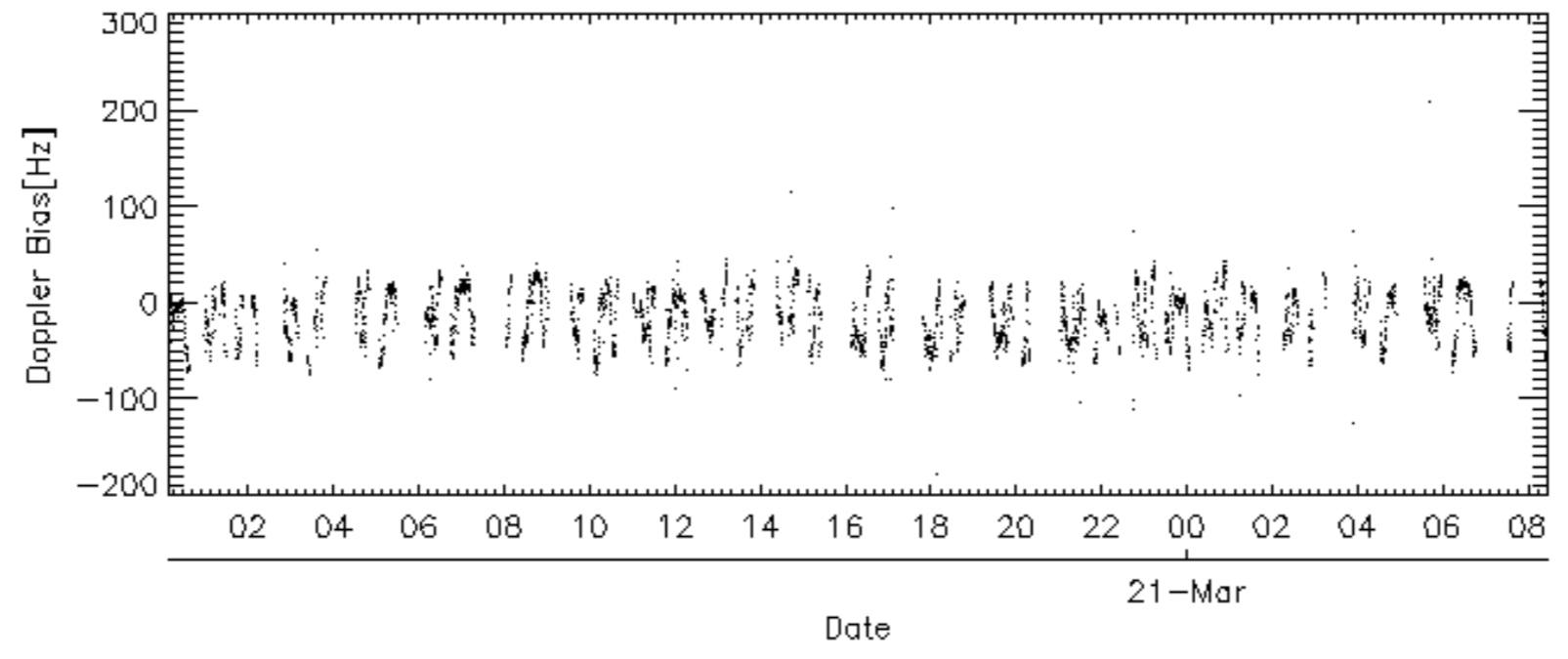
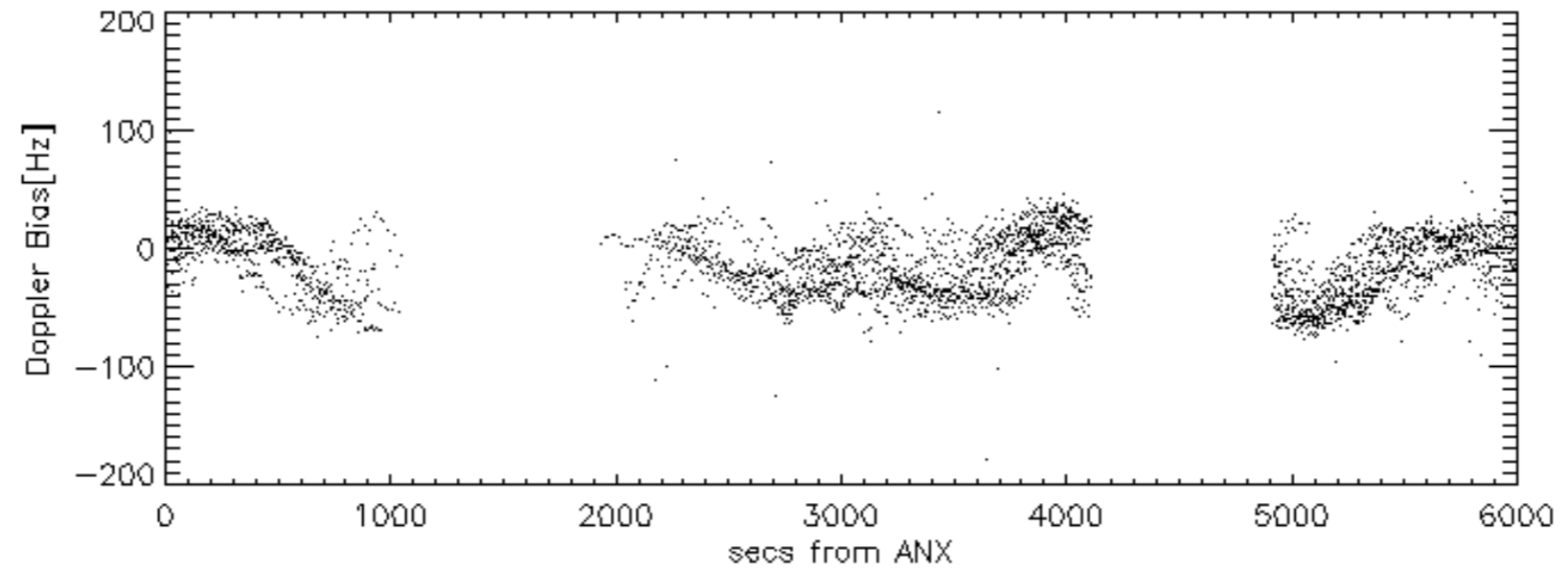
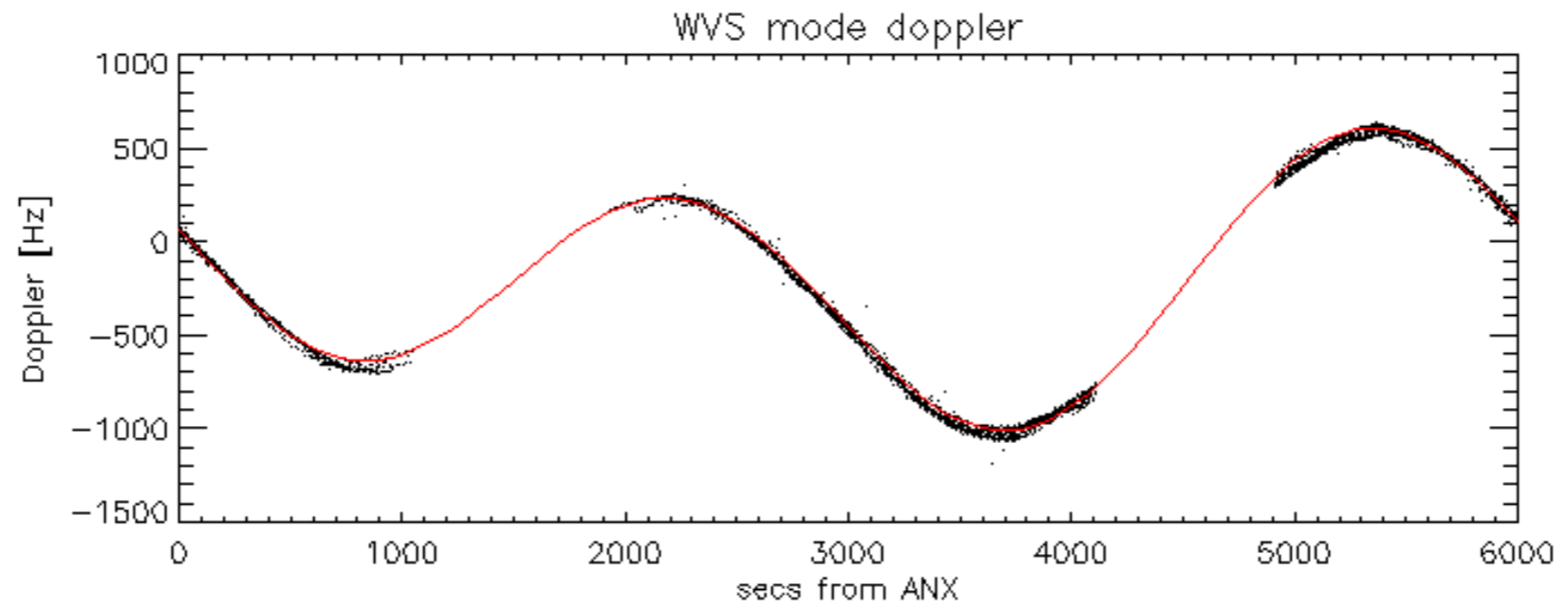
Doppler 'WVS' 'IS2' ascending



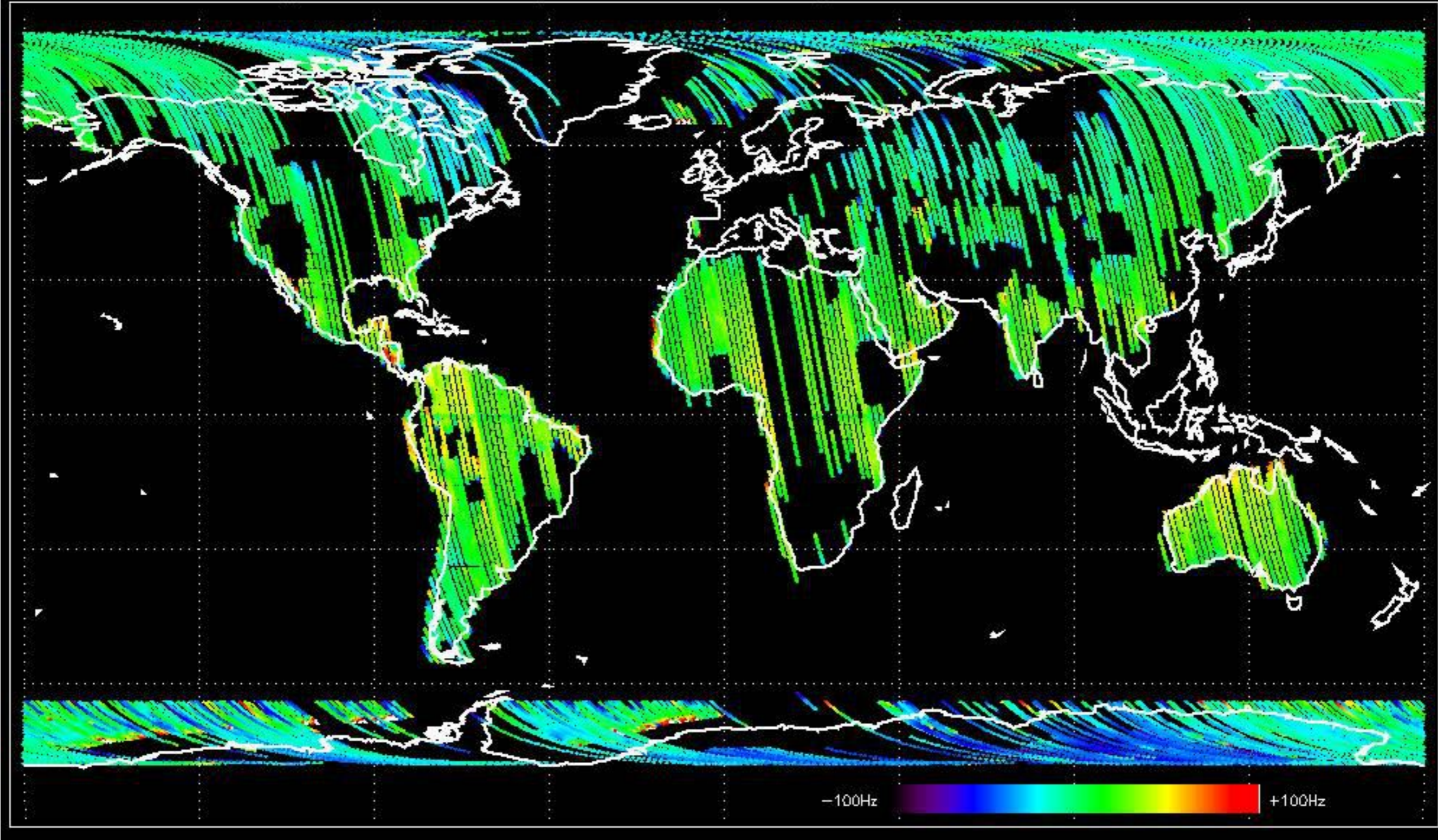
Doppler 'WVS' 'IS2' descending



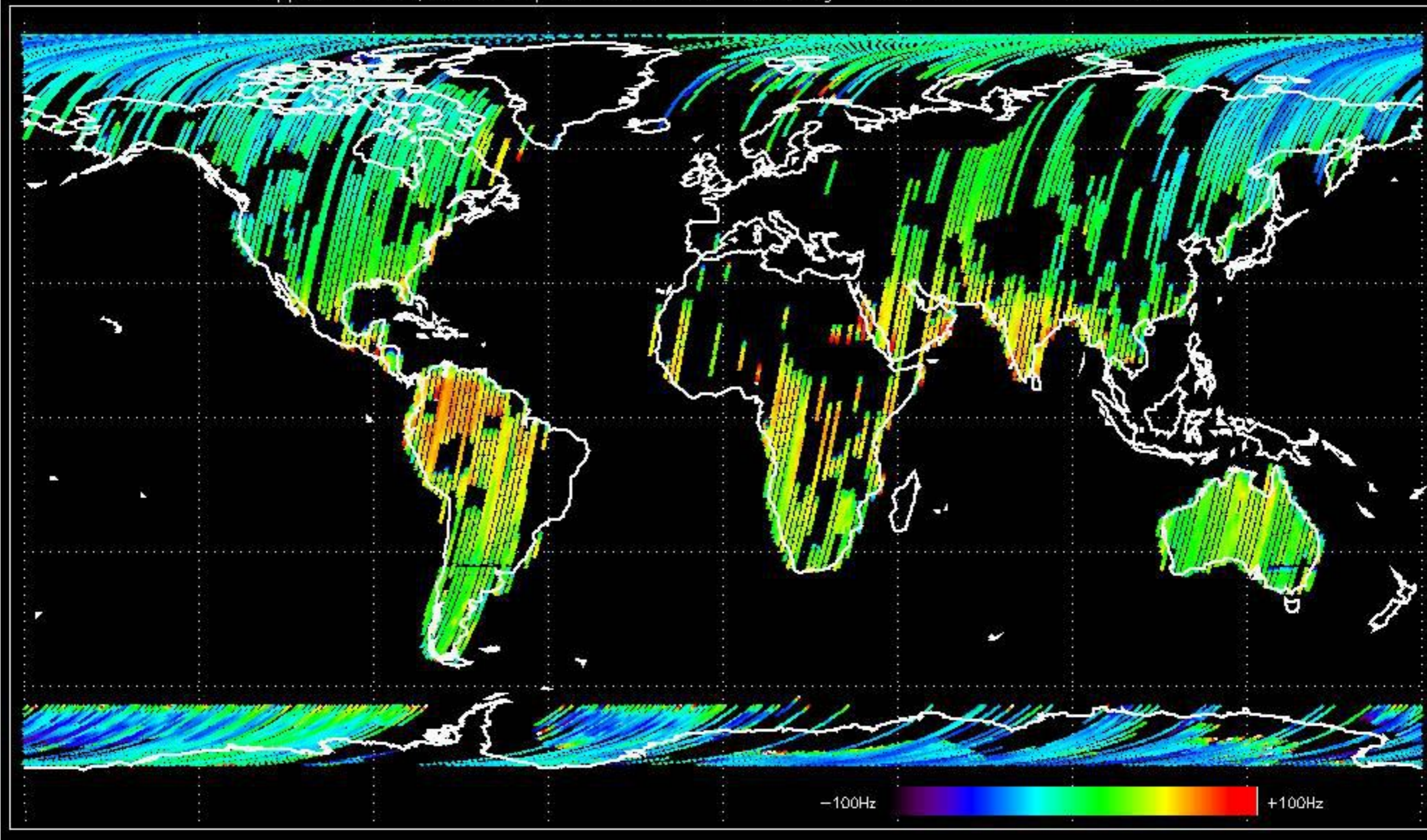




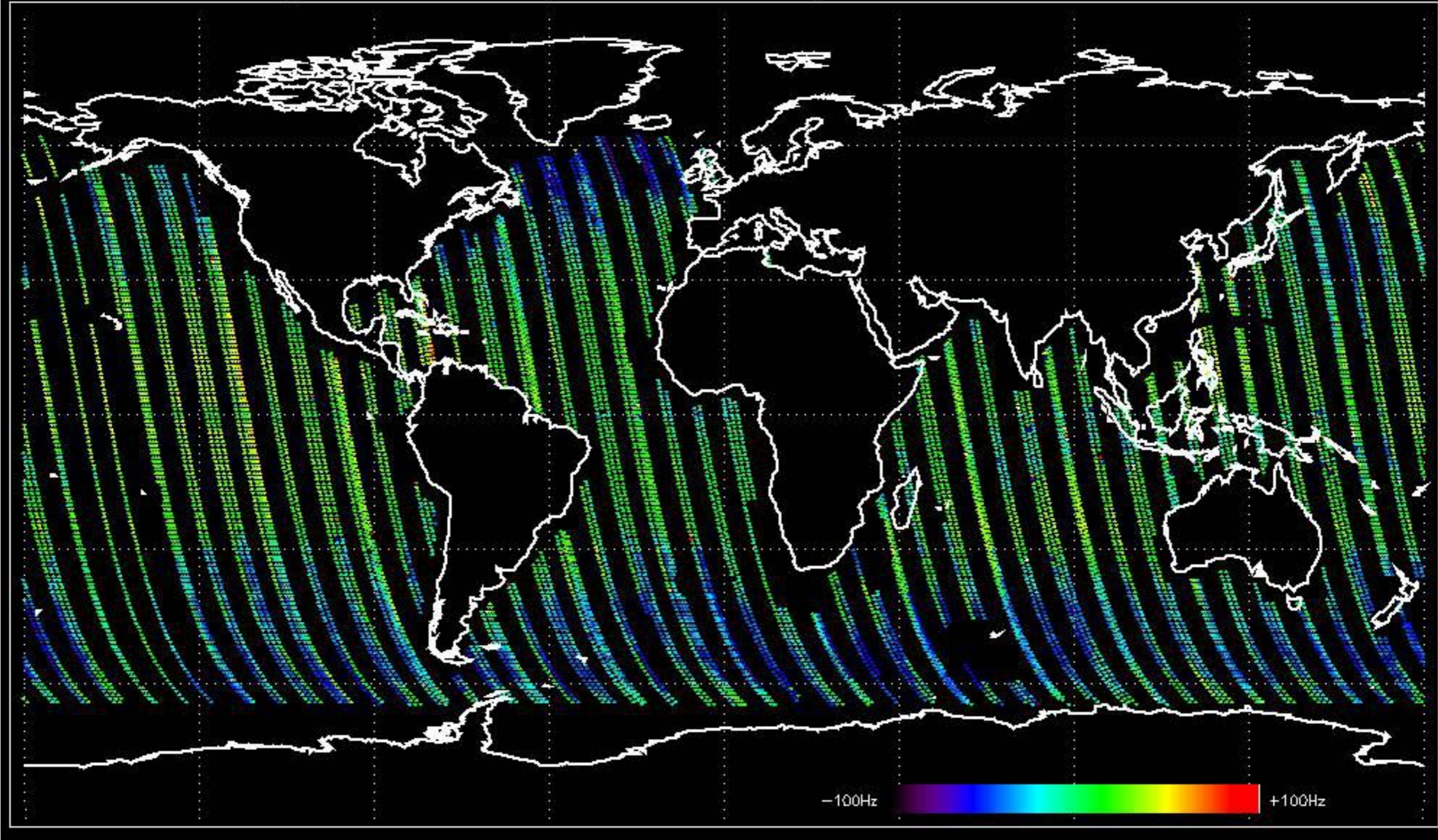
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.302776 Hz



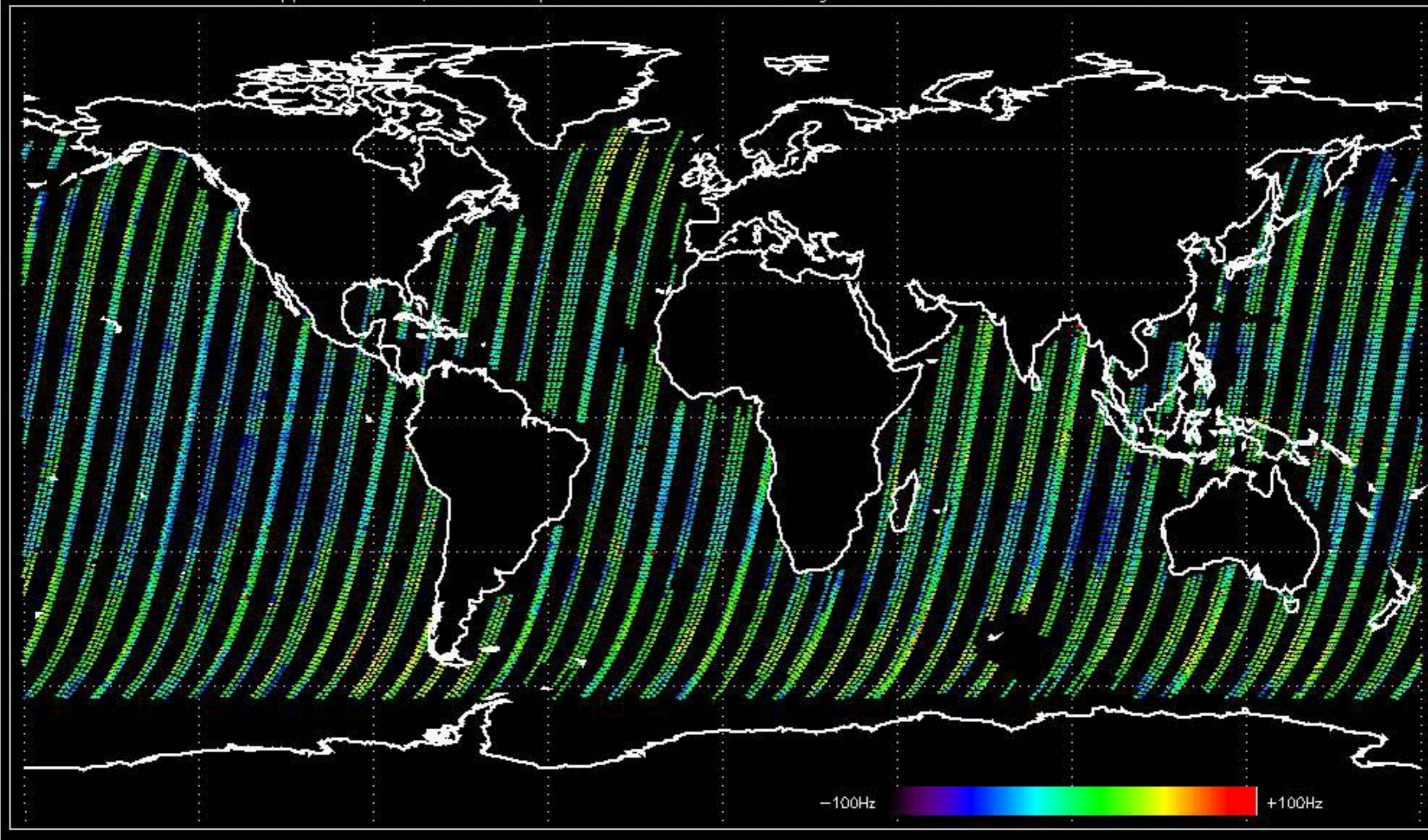
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.024738 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -15.805671 Hz

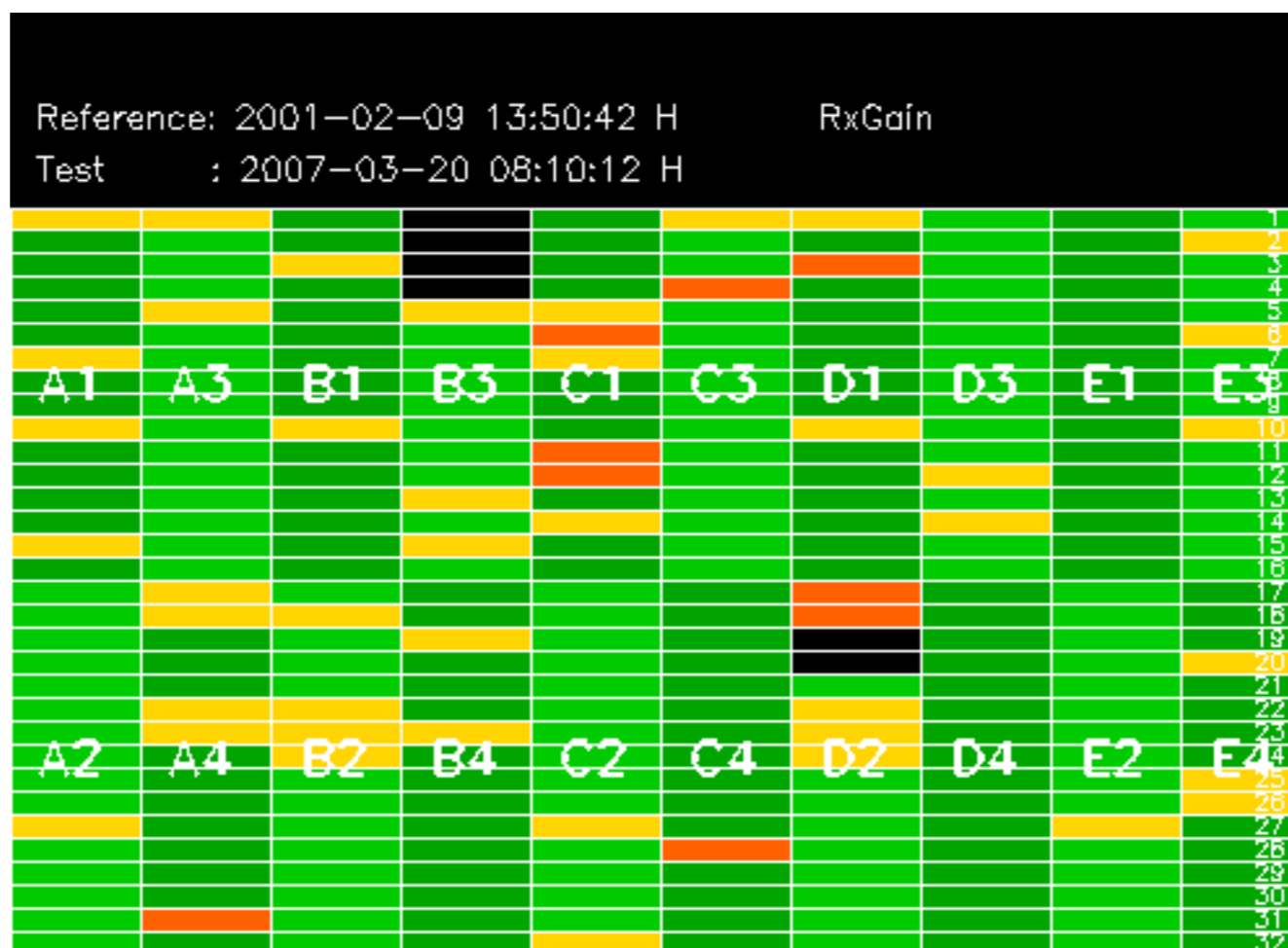


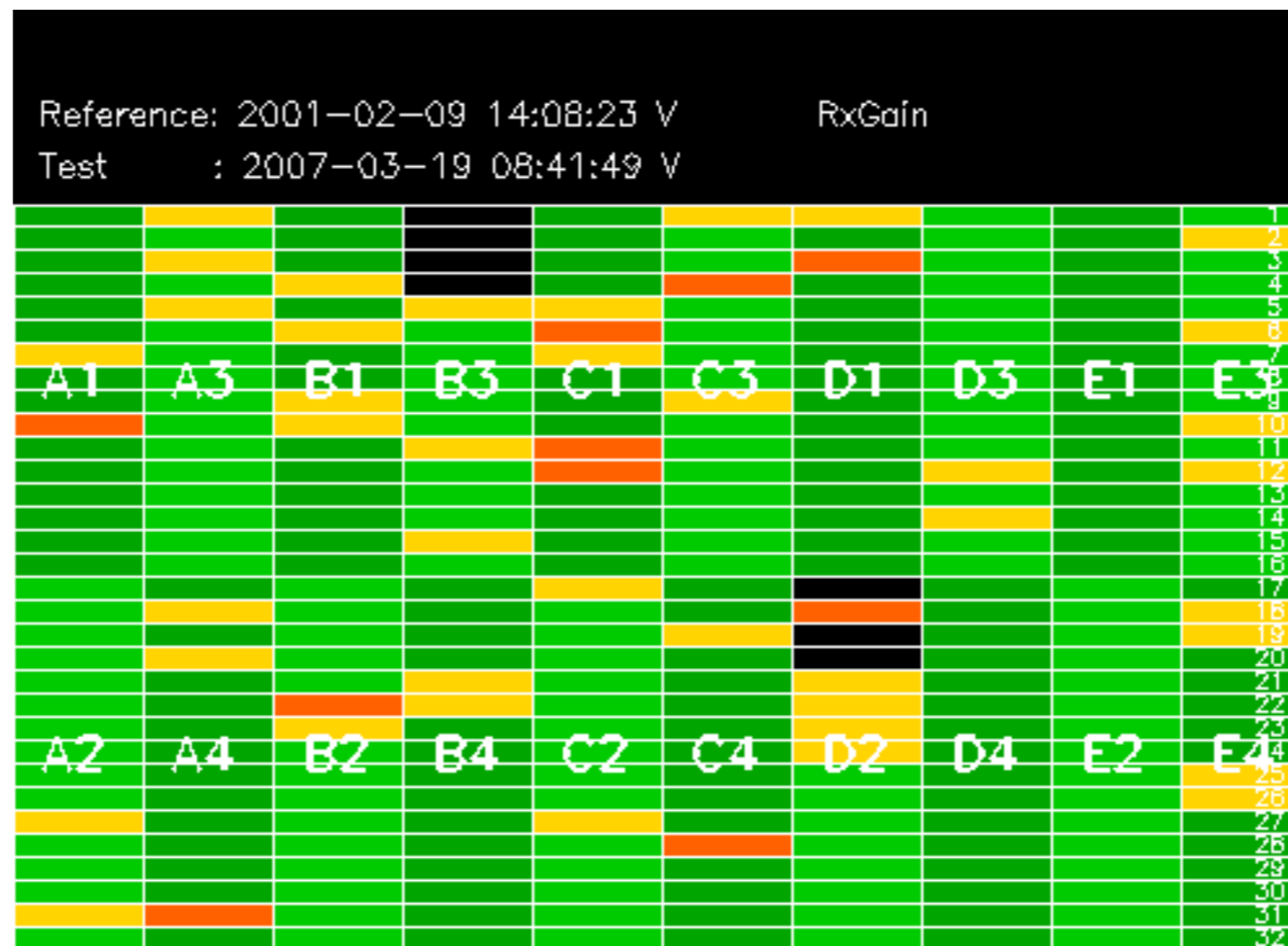
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -14.472560 Hz

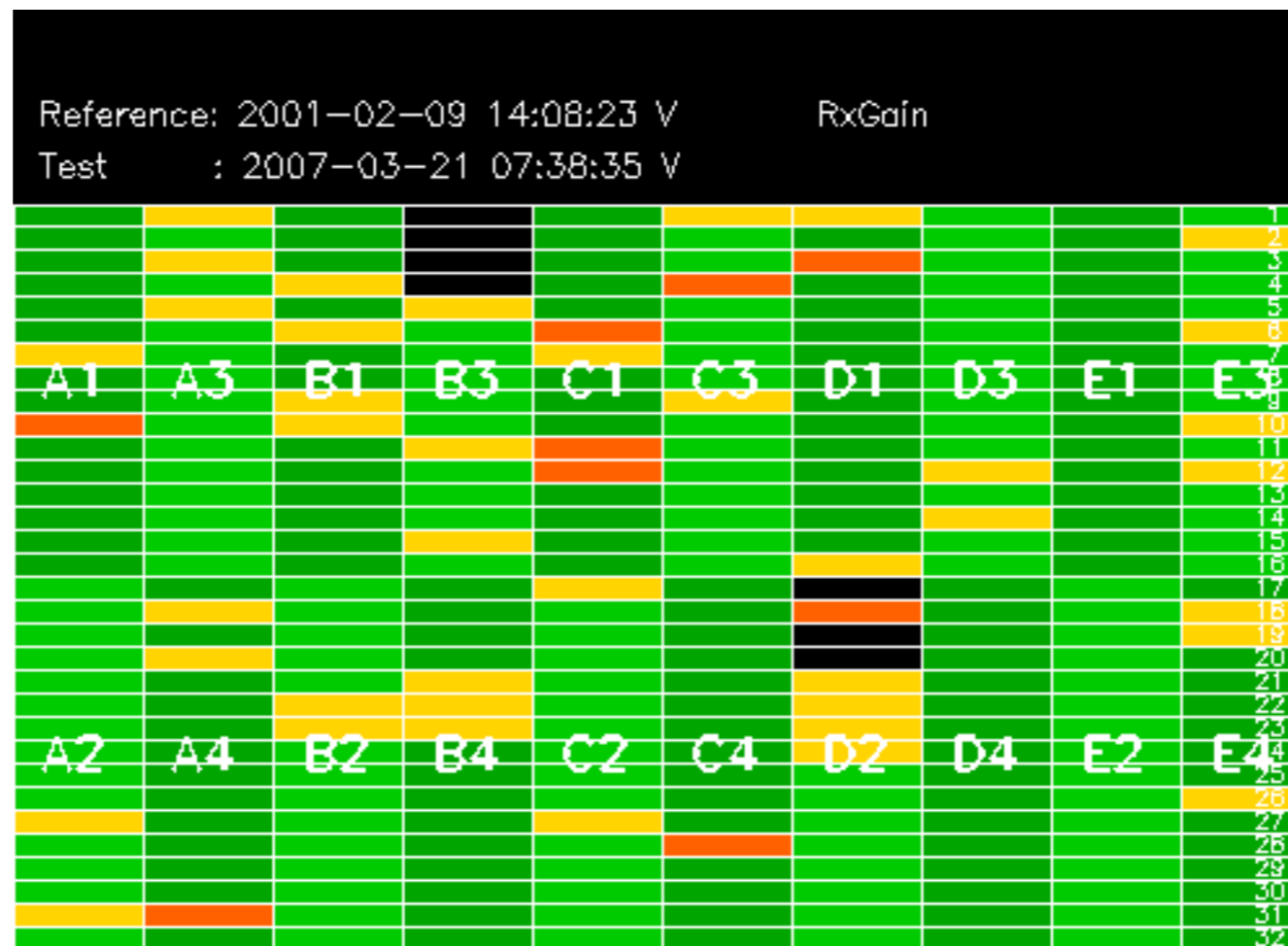


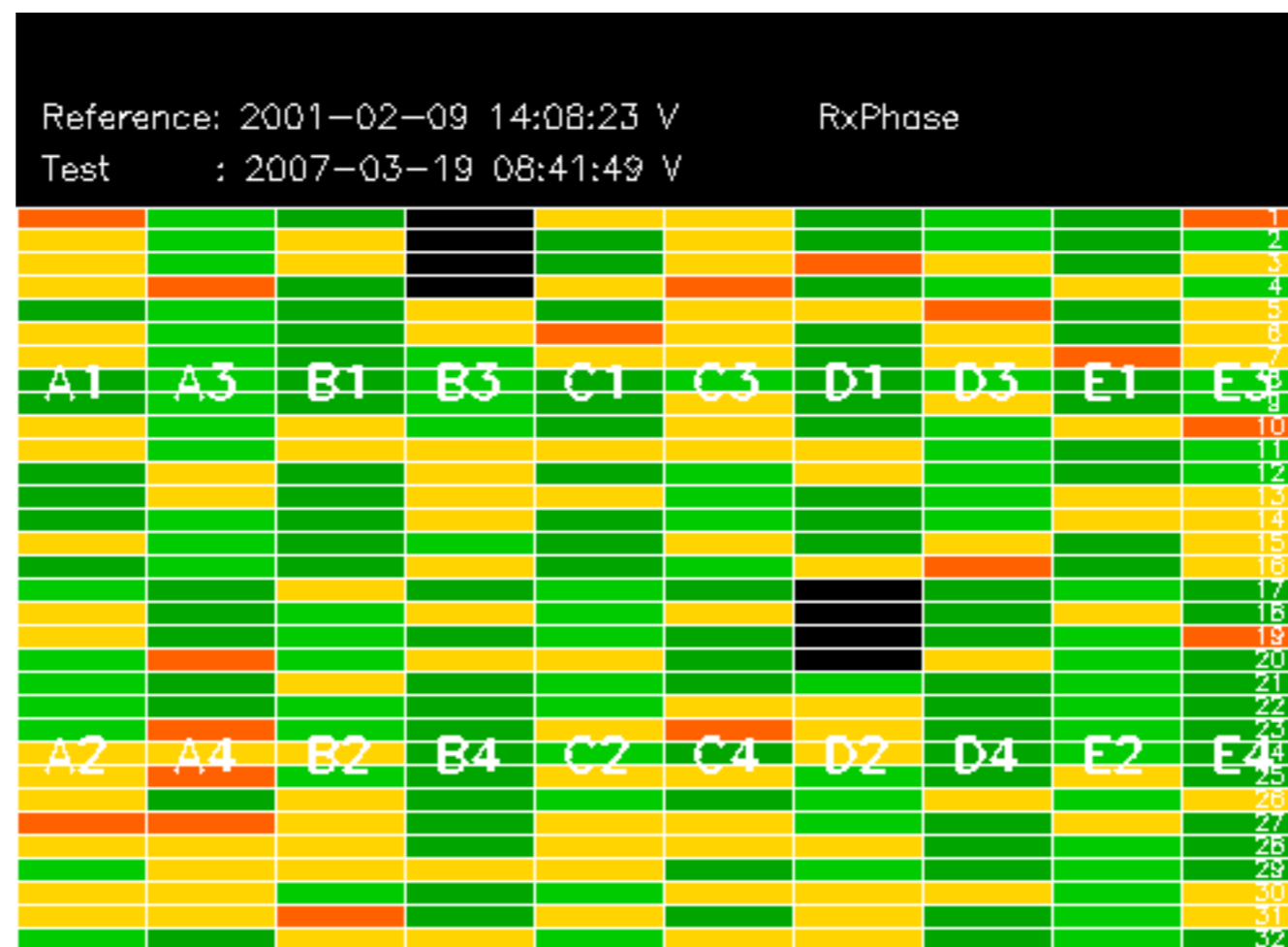
No anomalies observed on available MS products:

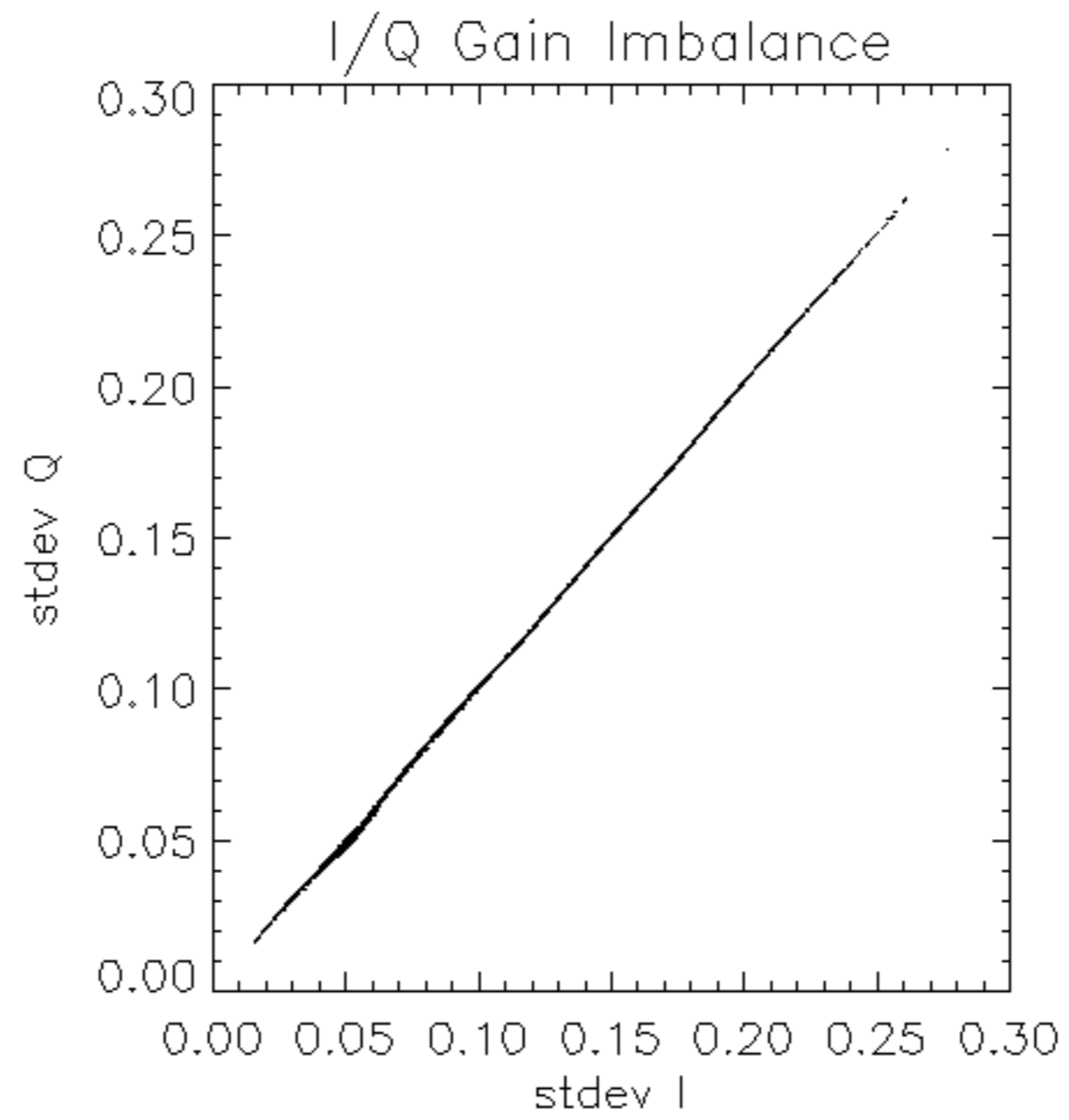
No anomalies observed.

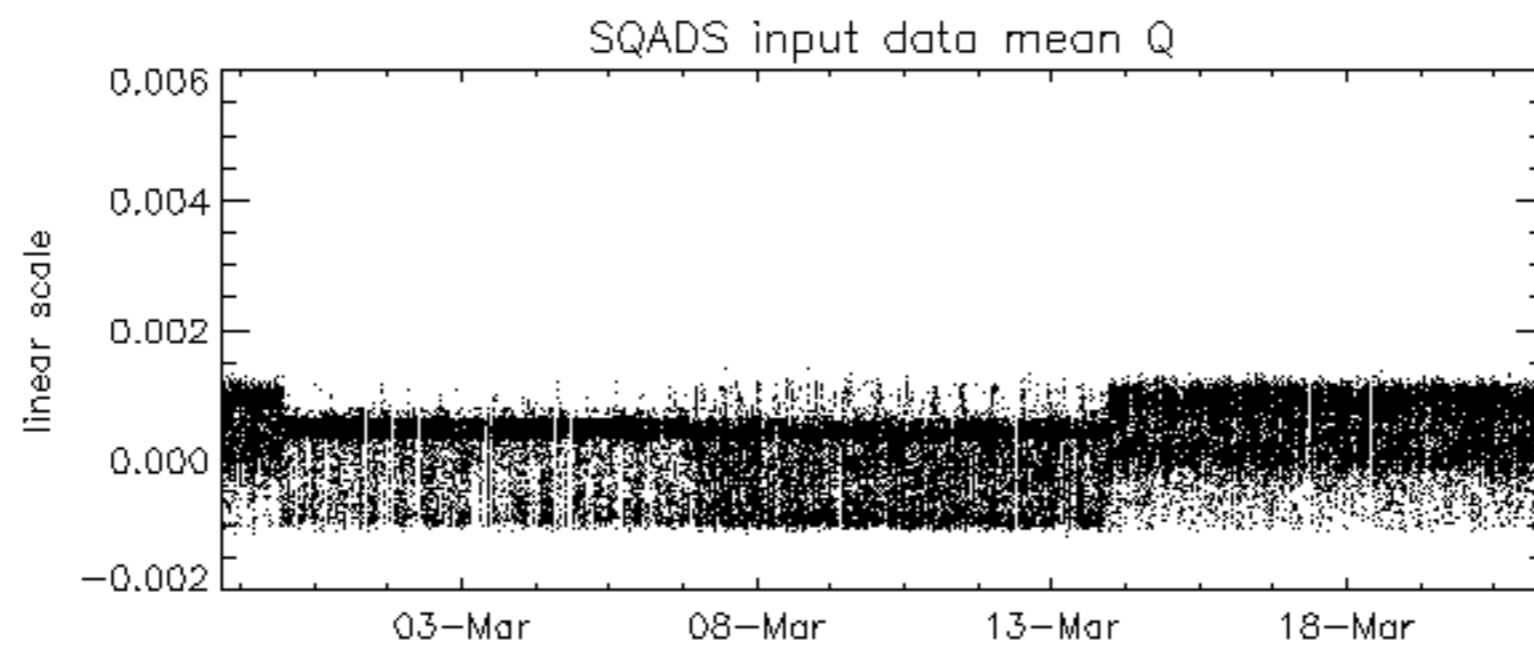
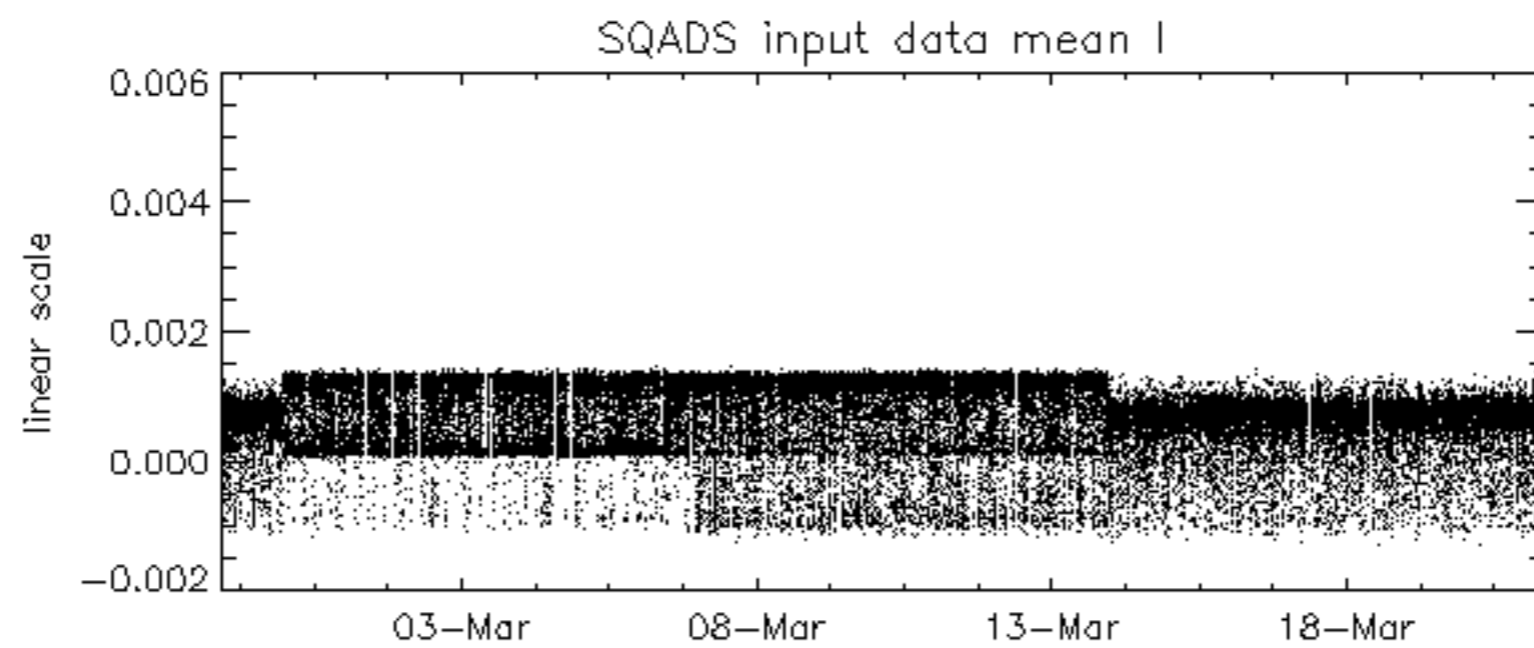
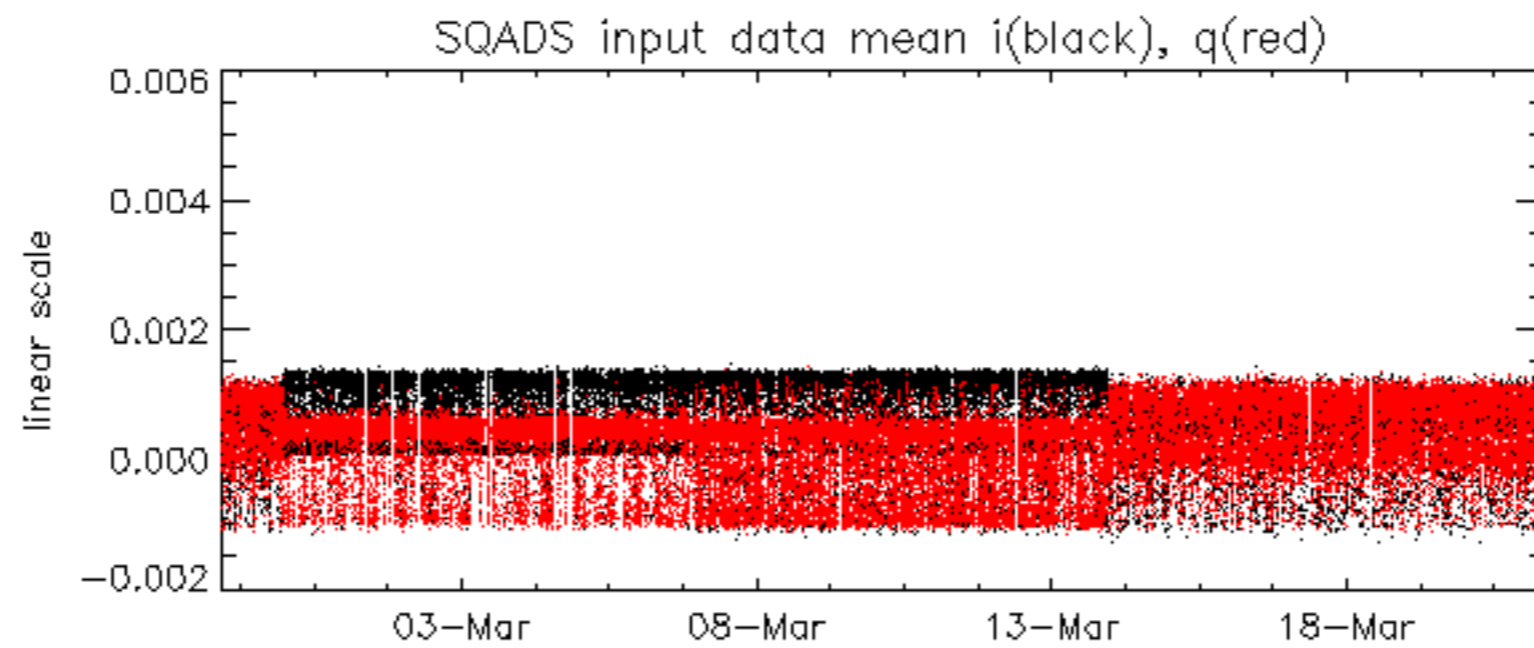


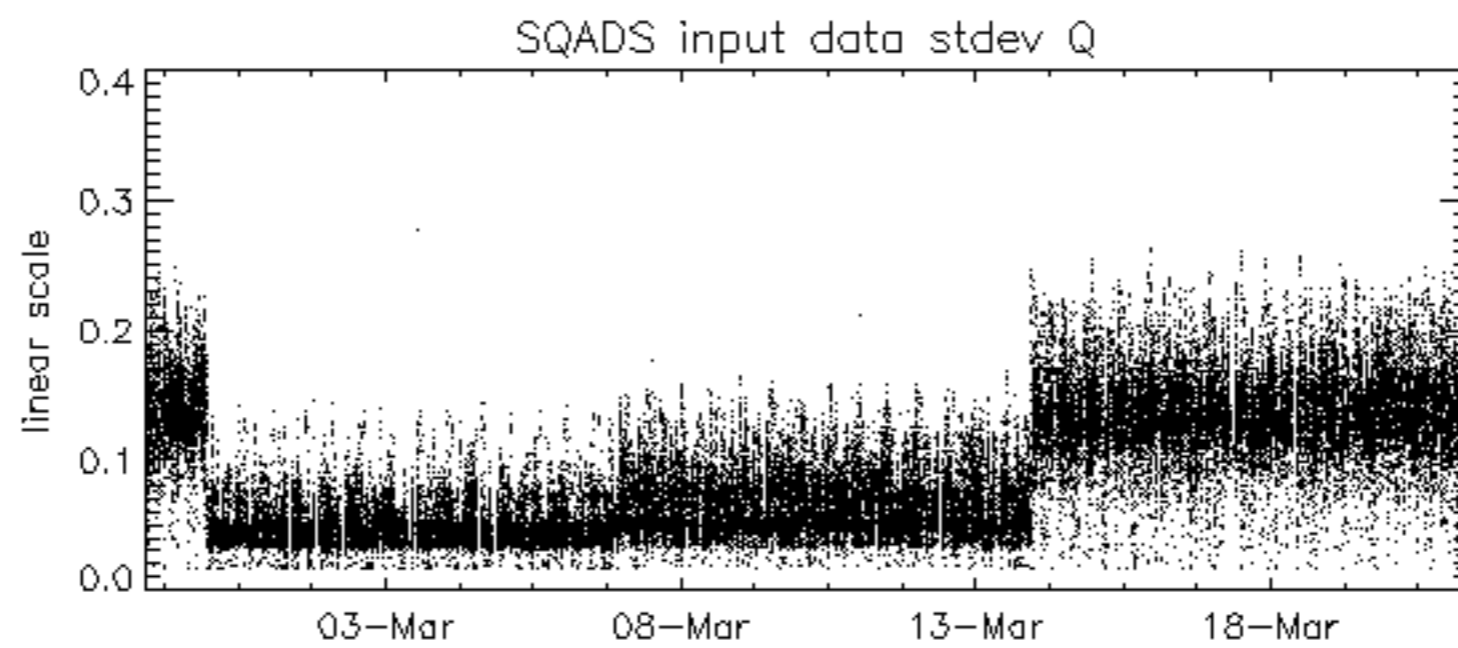
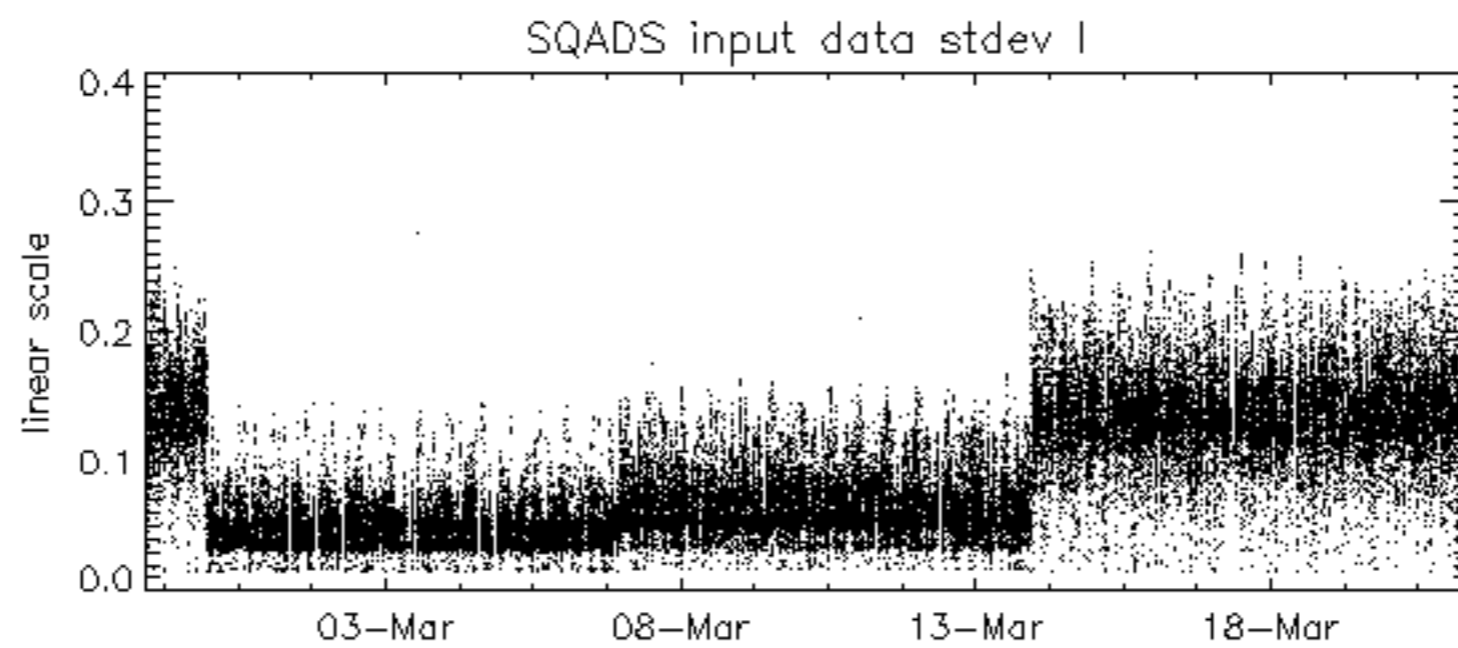
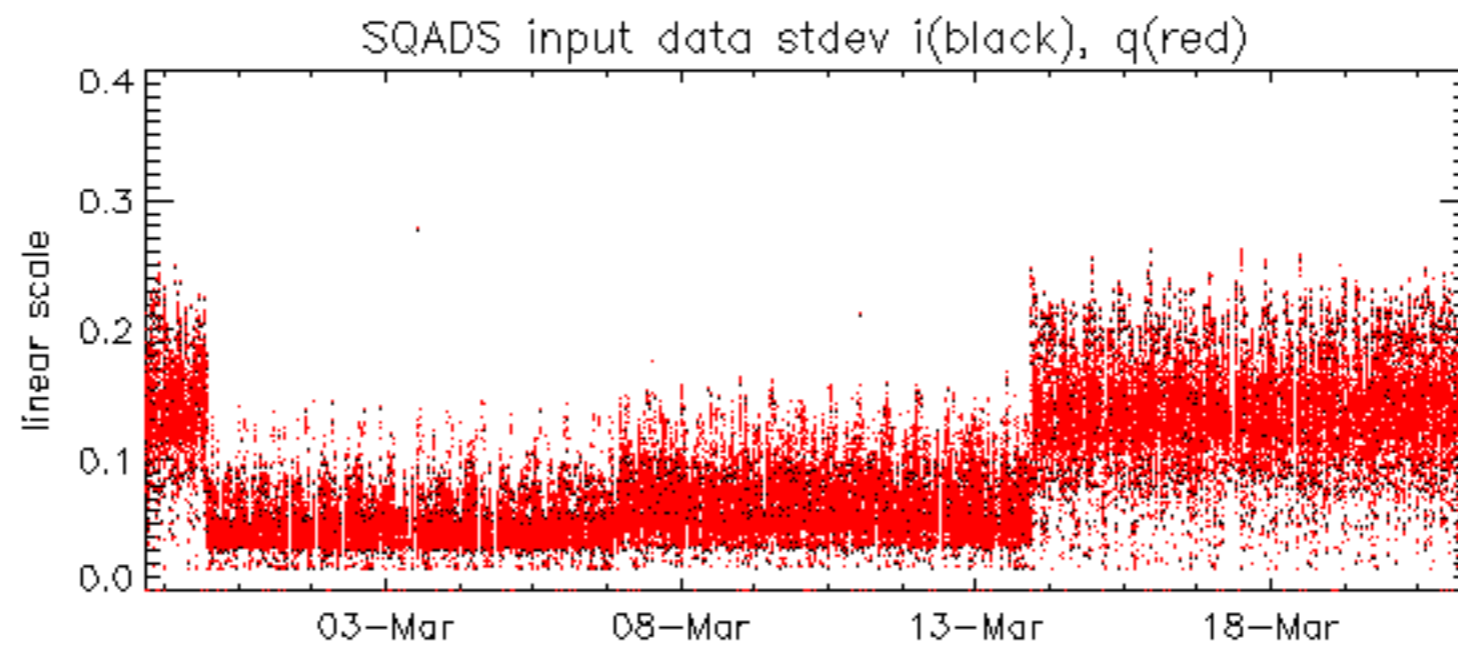








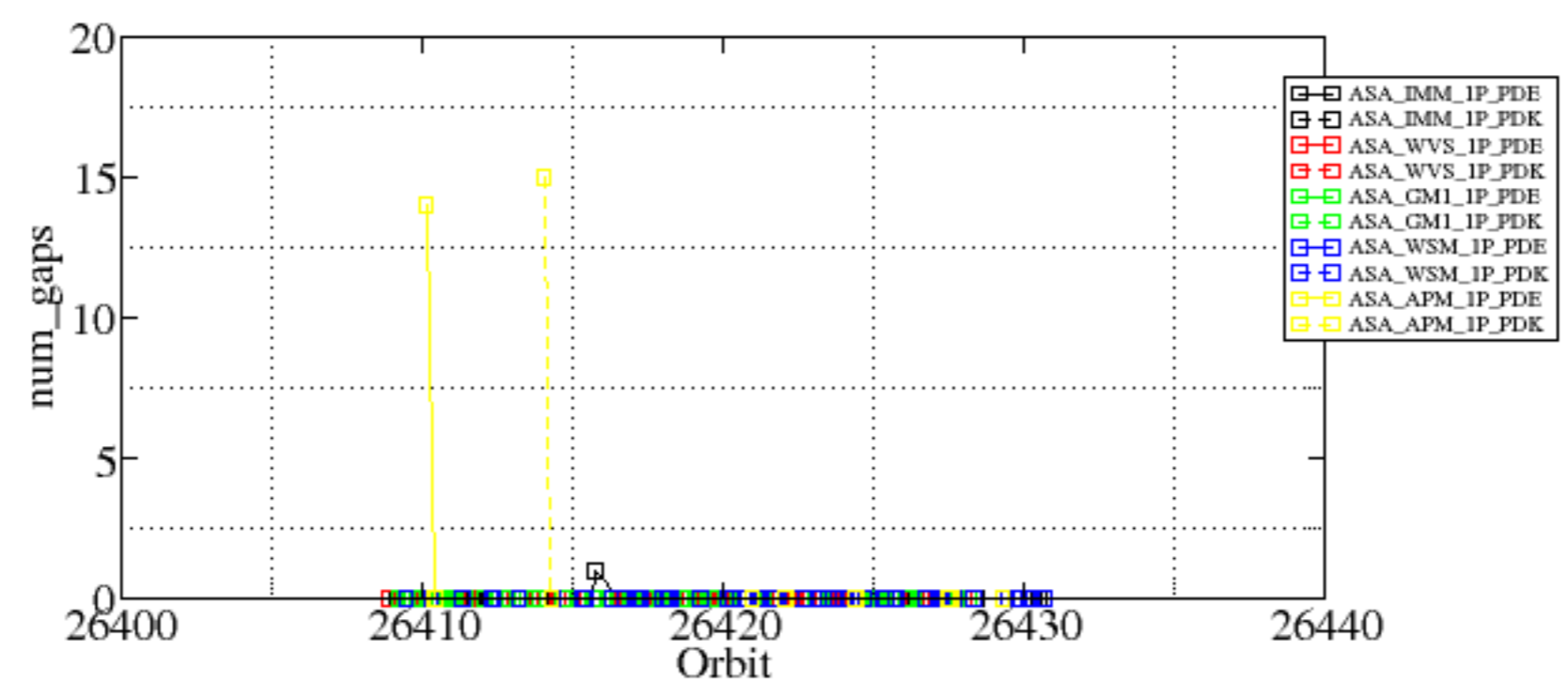




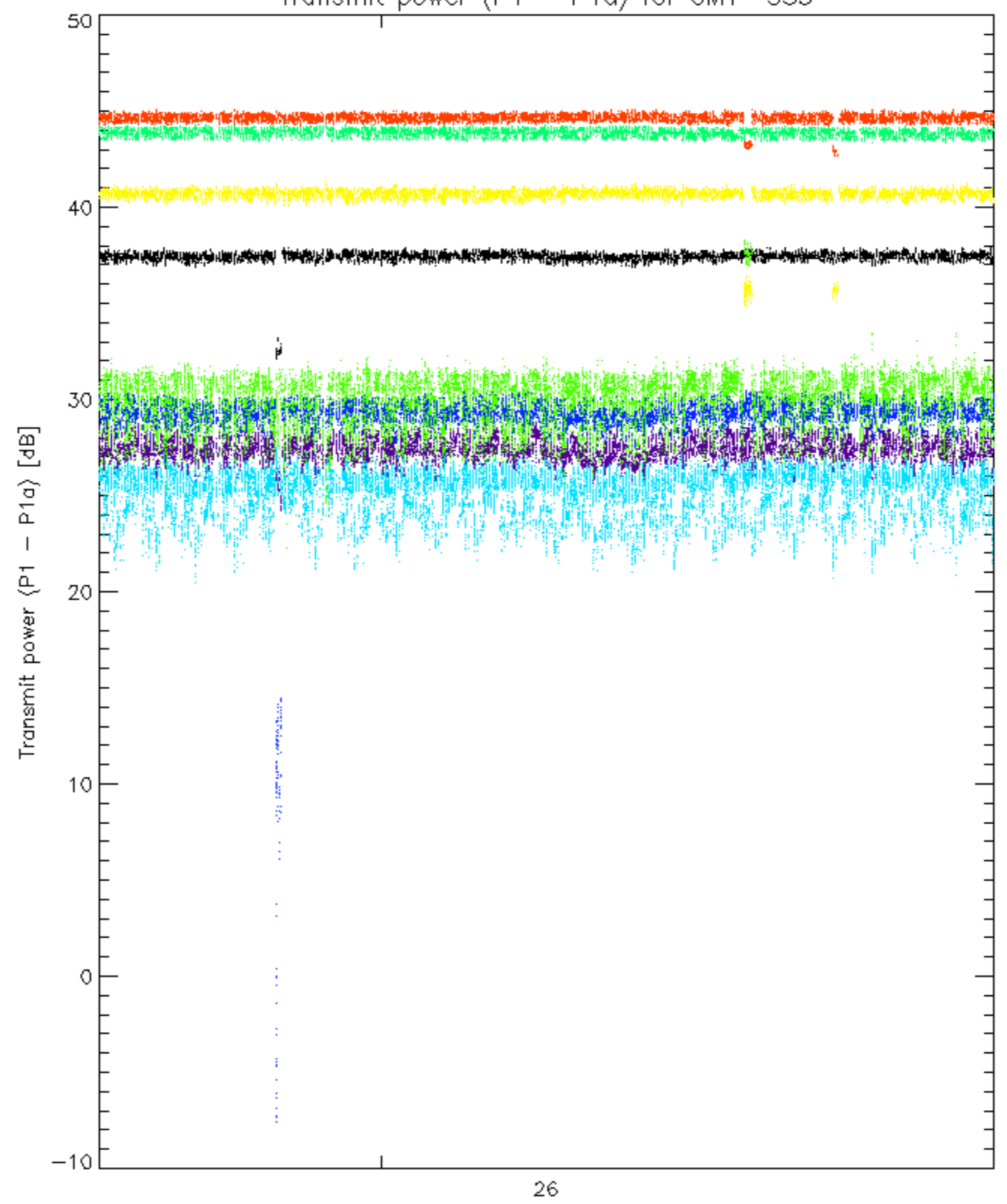
Summary of analysis for the last 3 days 2007032[901]

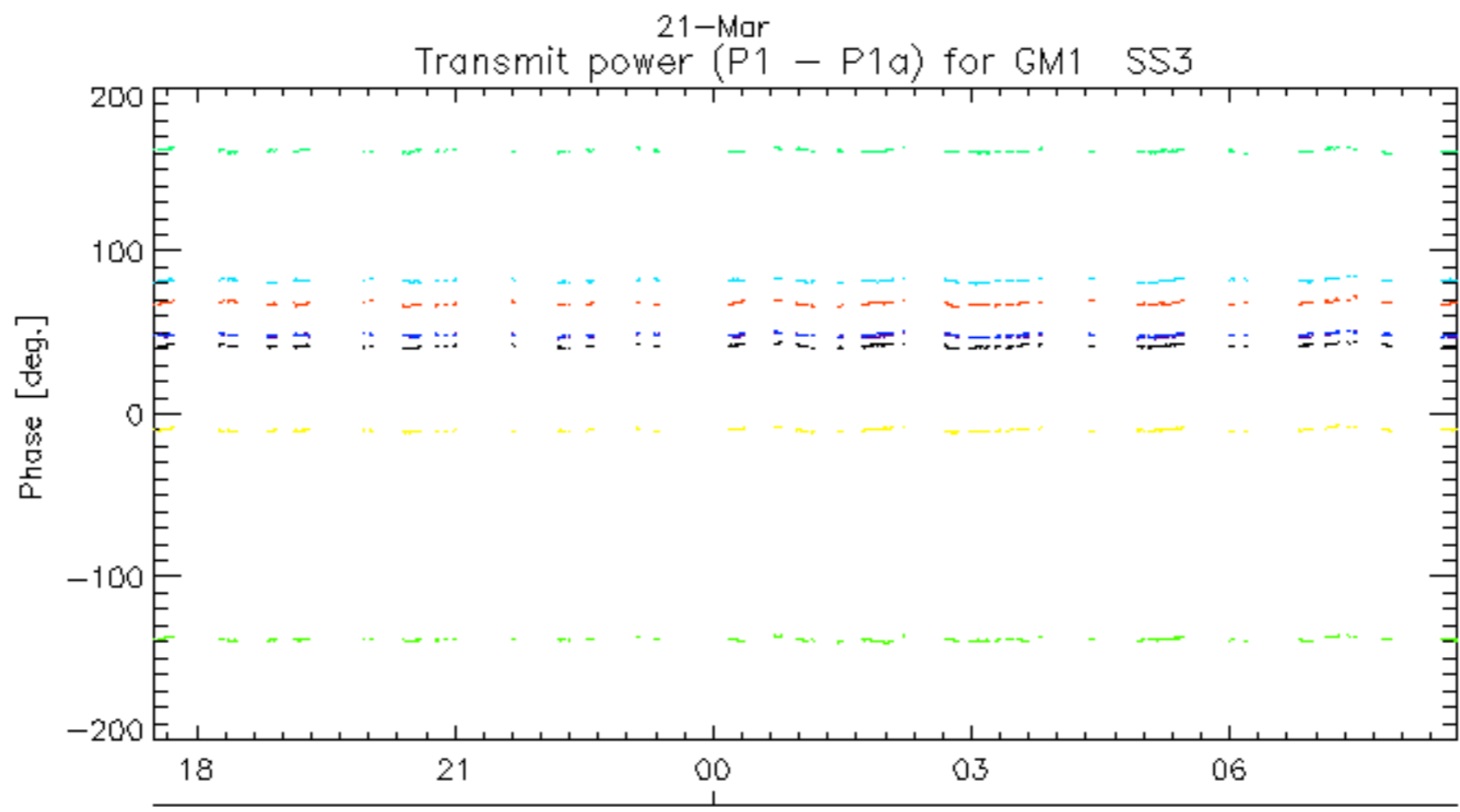
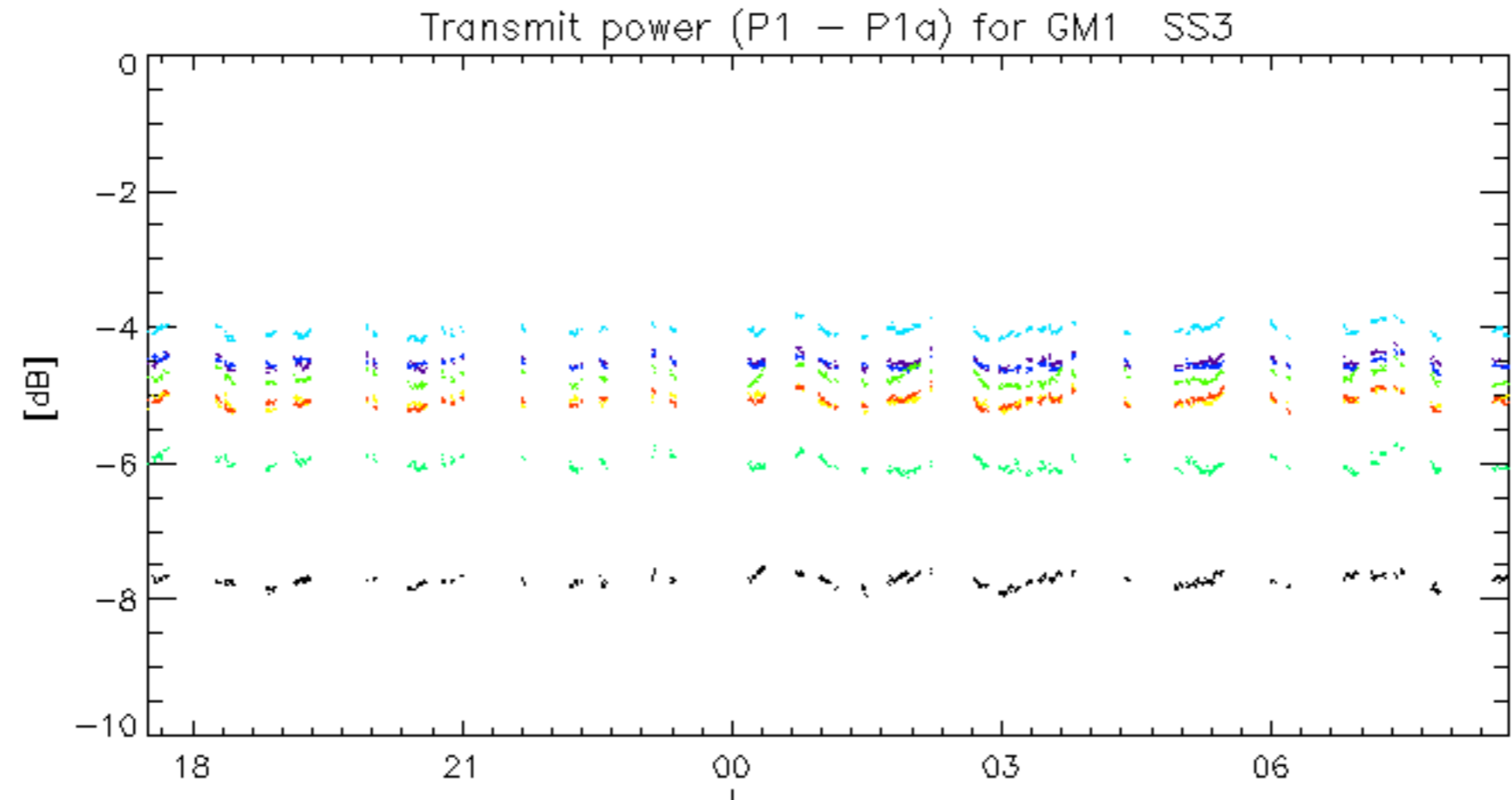
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070320_114001_000002562056_00309_26415_9412.N1	1	52
ASA_IMM_1PNPDK20070320_131732_000000812056_00310_26416_7792.N1	0	5
ASA_IMM_1PNPDK20070320_135505_000000602056_00311_26417_7788.N1	0	24
ASA_IMM_1PNPDK20070320_135505_000000792056_00311_26417_7798.N1	0	24
ASA_WSM_1PNPDE20070320_010734_000000852056_00303_26409_8706.N1	0	32
ASA_WSM_1PNPDE20070321_003657_000001402056_00317_26423_0187.N1	0	31
ASA_WSM_1PNPDK20070320_123133_000003062056_00310_26416_7660.N1	0	17
ASA_WSM_1PNPDK20070320_135308_000000852056_00311_26417_7800.N1	0	21
ASA_WSM_1PNPDK20070321_102446_000003002056_00323_26429_8662.N1	0	2
ASA_WSM_1PNPDK20070321_124220_000001332056_00324_26430_8919.N1	0	1
ASA_APM_1PNPDE20070320_021347_000000402056_00304_26410_8728.N1	0	0
ASA_APM_1PNPDK20070320_084923_000000402056_00308_26414_7265.N1	15	257



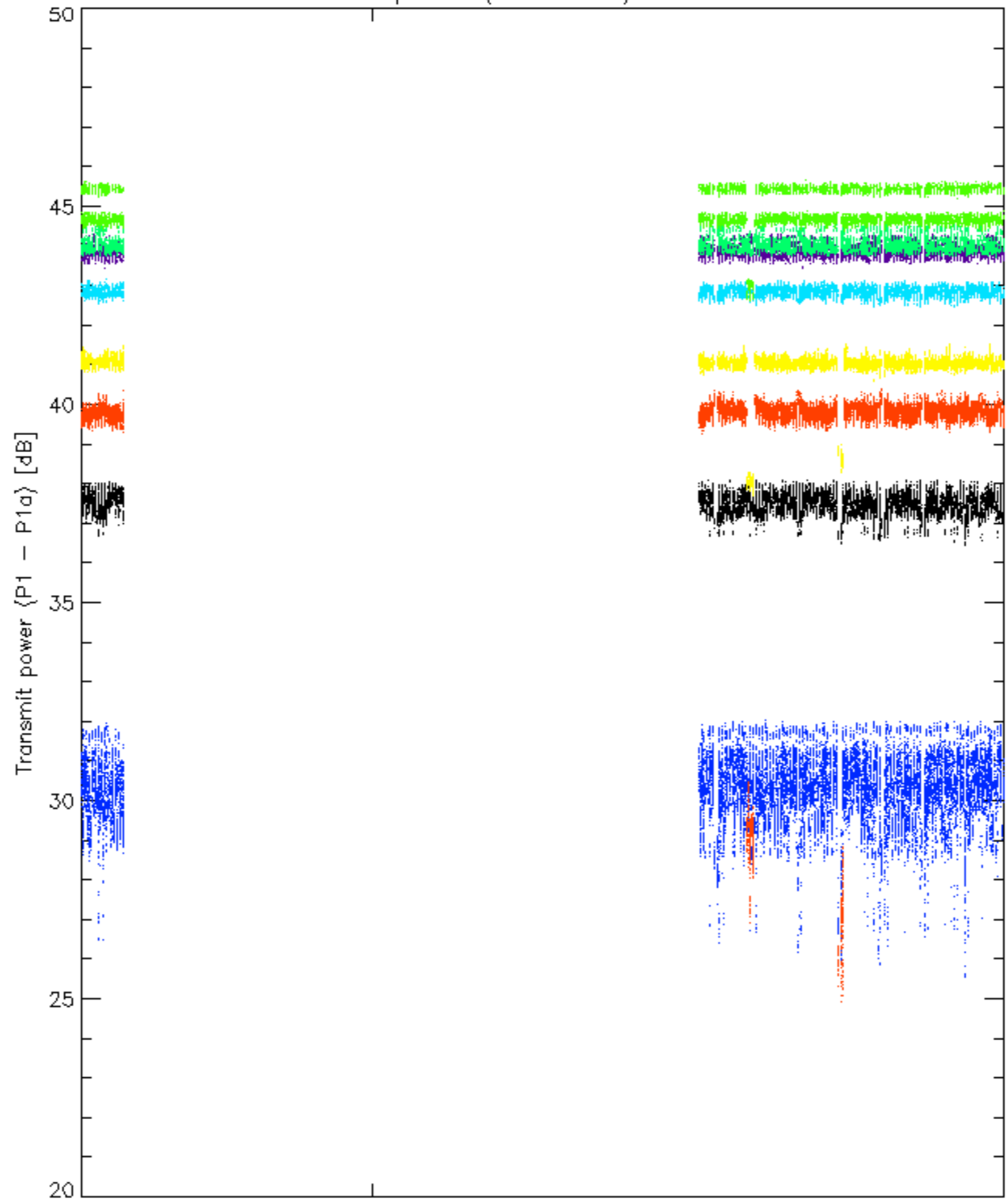
Transmit power (P1 - P1a) for GM1 SS3





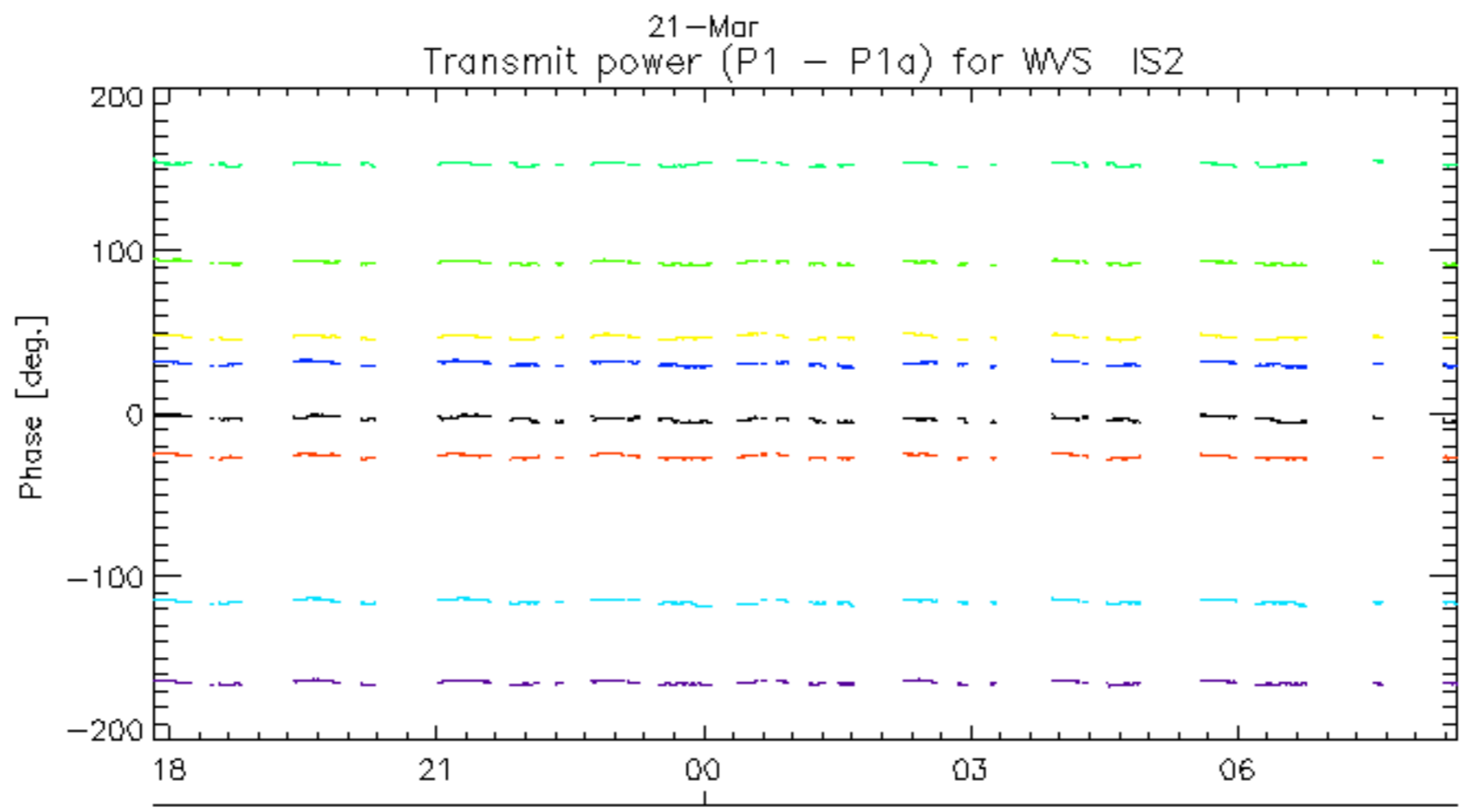
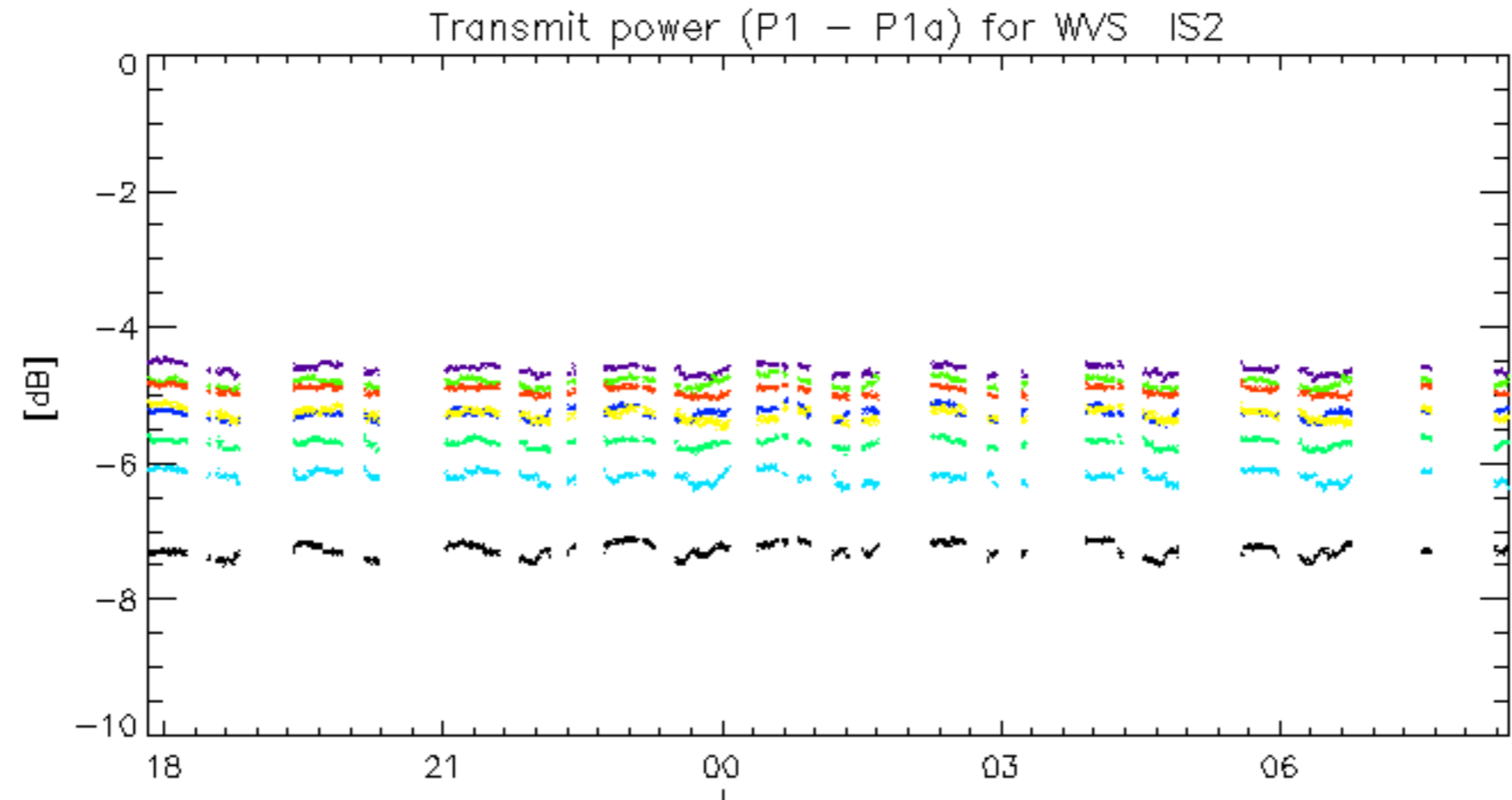
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



26

rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



rows: **3** **7** **11** **15** **19** **22** **26** **30**

No unavailabilities during the reported period.